

**BEFORE THE
PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA**

In the Matter of)

Continued Availability of Unbundled)
High Capacity Loops at Certain Locations)
And Unbundled High Capacity Transport)
On Certain Routes Pursuant to the)
Federal Communications Commission's)
Triennial Review Order)
_____)

Docket No. 20003-327-C

REBUTTAL TESTIMONY

OF

GARY J. BALL

ON BEHALF OF

COMPETITIVE CARRIERS OF THE SOUTH

PUBLIC VERSION

TABLE OF CONTENTS

	Page
I. BELLSOUTH'S INTERPRETATIONS OF THE TRO ARE INCORRECT	5
II. CRITIQUE OF BELLSOUTH'S SELF-PROVISIONING TRIGGER ANALYSIS	16
A. HIGH CAPACITY LOOPS	16
B. DEDICATED TRANSPORT	23
III. CRITIQUE OF BELLSOUTH SOUTH CAROLINA WHOLESALE TRIGGER ANALYSES	29
A. HIGH CAPACITY LOOPS	29
B. DEDICATED TRANSPORT	35
IV. POTENTIAL DEPLOYMENT ANALYSIS FOR HIGH- CAPACITY LOOPS AND DEDICATED TRANSPORT	40
V. CRITIQUE OF BELLSOUTH SOUTH CAROLINA POTENTIAL DEPLOYMENT ANALYSIS	47
A. HIGH CAPACITY LOOPS	47
B. DEDICATED TRANSPORT	62
VI. TRANSITIONAL ISSUES	62

1 **Q. PLEASE STATE YOUR FULL NAME, TITLE AND BUSINESS**
2 **ADDRESS.**

3 A. My name is Gary J. Ball. I am an independent consultant providing
4 analysis of regulatory issues and testimony for telecommunications
5 companies. My business address is 47 Peaceable Street, Ridgefield,
6 Connecticut 06877.

7

8 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS**
9 **PROCEEDING?**

10 A. I am testifying on behalf of the Competitive Carriers of the South
11 ("CompSouth"). CompSouth is a coalition of competitive carriers
12 operating in the Southeast, including South Carolina, that are committed to
13 the advancement of policies that encourage local and long distance
14 competition in the state.

15

16 **Q. ARE YOU THE SAME GARY J. BALL WHO SUBMITTED**
17 **DIRECT TESTIMONY IN THIS PROCEEDING ON MARCH 12,**
18 **2004?**

19 A. Yes, I am.

20

21 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

22 A. The purpose of my rebuttal testimony is to analyze and rebut BellSouth's
23 assertions regarding the self-provisioning and wholesale triggers for high

1 capacity loops and dedicated transport, and BellSouth's claims that
2 numerous customer locations satisfy the FCC's rigorous potential
3 deployment requirements.

4 In its *Triennial Review Order* ("TRO"),¹ the FCC determined that
5 incumbent local exchange carriers ("ILECs") must continue to provide
6 CLECs with access to unbundled loops and dedicated transport at the DS1,
7 DS3, and dark fiber capacity levels ("high-capacity loops" and "dedicated
8 transport"). The FCC conducted a comprehensive analysis that resulted in
9 the determination that CLECs are impaired without access to high-
10 capacity loops and dedicated transport at the national level. Recognizing
11 that there may be individual customer locations or transport routes where
12 competitively provisioned loops and transport have been deployed to such
13 an extent that CLECs are not impaired, the FCC developed a procedure
14 known as the trigger analysis ("triggers"). The triggers are designed to
15 give ILECs an opportunity to demonstrate to their respective state
16 commissions that CLECs are not impaired without access to unbundled
17 high-capacity loops or transport at *specific* customer locations or on
18 *specific* dedicated transport routes for specific capacity levels. The two

¹ Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, *In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers* (CC Docket No. 01-338); *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996* (CC Docket No. 96-98); *Deployment of Wireline Services Offering Advanced Telecommunications Capability* (CC Docket No. 98-147), FCC 03-36 (rel. Aug. 21, 2003).

1 triggers the FCC adopted – self-provisioning and wholesale – are meant to
2 be evaluated independently and should not be blended in analysis.

3 In my testimony, I demonstrate that BellSouth, through its witness
4 Shelley W. Padgett, has overstated the number of enterprise customer
5 locations and transport routes that satisfy the self-provisioning and
6 wholesale triggers. Additionally, I explain why BellSouth's potential
7 deployment analysis for high capacity loops contained in Dr. Andy
8 Banerjee's testimony fails to incorporate the FCC's location-specific
9 analysis, and as a result produces unjustifiable quantities of customer
10 locations for which BellSouth erroneously contends that the Commission
11 should make non-impairment findings and relieve BellSouth of its
12 unbundling obligations.

13

14 **Q. HOW IS YOUR TESTIMONY ORGANIZED?**

15 A. My testimony is divided into six sections. In Section I, I explain how
16 BellSouth is incorrectly interpreting the requirements of the *TRO*. In
17 Section II, I critique BellSouth's self-provisioning trigger analysis, and
18 explain how BellSouth's has overstated the number of buildings and
19 routes that meet the triggers due to its incorrect interpretations of the *TRO*.
20 In Section III, I provide a similar critique of BellSouth's wholesale trigger
21 analysis. In Section IV, I describe the FCC's potential deployment
22 criteria. In Section V, I critique BellSouth's potential deployment analysis

1 relating to loops. In Section VI, I address Ms. Padgett's inadequate
2 proposal for transitioning services that have been delisted.

3
4 **I. BELLSOUTH'S INTERPRETATIONS OF THE TRO ARE**
5 **INCORRECT**

6
7 **Q. MS. PADGETT MAKES SEVERAL ASSERTIONS IN HER**
8 **TESTIMONY REGARDING PROPER INTERPRETATION OF**
9 **THE TRO. CAN YOU SUMMARIZE THESE ASSERTIONS?**

10 **A.** Yes. First, Ms. Padgett claims that it is appropriate to include OC(n) level
11 loop and transport services in the self-provisioning trigger analyses for
12 DS1, DS3, and dark fiber. Second, Ms. Padgett asserts that CLECs do not
13 have to be offering dedicated transport service between the "A" and "Z"
14 wire centers for a route to be included, and that switched transport can be
15 counted as dedicated transport for the purposes of the triggers. Third, Ms.
16 Padgett asserts that a CLEC is not required to offer wholesale service at a
17 specific location or route for that location or route to be counted toward
18 the trigger. Fourth, Ms. Padgett asserts that it is not necessary for a CLEC
19 to have access to an entire building to meet the self-provisioning triggers.
20 Finally, Ms. Padgett asserts that wholesale loops do not have to be offered
21 at wire center collocation arrangements. Each of these assertions is
22 incorrect.

23

1 **Q. HOW DO THESE ASSERTIONS IMPACT BELL SOUTH'S**
2 **PROPOSED TRIGGER ANALYSIS?**

3 A. The result of applying BellSouth's interpretations to the triggers is a larger
4 number of buildings and routes than would result from an accurate and
5 realistic reading of the *TRO*.

6
7 **Q. PLEASE EXPLAIN MS. PADGETT'S ASSERTION REGARDING**
8 **INCLUDING OC(N) LEVEL SERVICES IN THE SELF-**
9 **PROVISIONING TRIGGERS.**

10 A. On pages 8 and 26 of her direct testimony, Ms. Padgett declares that
11 OC(n) facilities should count for the DS3 and DS1 triggers based upon her
12 understanding that DS3 and DS1 services can be derived from an OC(n)
13 system. For example, if a carrier has deployed an OC(3) system, that
14 system potentially could be configured with the appropriate electronics to
15 derive 3 DS3s, each of which can be further multiplexed to derive 28
16 DS1s. Ms. Padgett asserts that the FCC intended for this "potential
17 capability" of the CLEC networks to be included in the triggers.

18
19 **Q. IS MS. PADGETT'S ASSERTION REGARDING OC(N) LEVEL**
20 **SERVICES CONSISTENT WITH THE *TRO*'S IMPAIRMENT**
21 **ANALYSIS AND CONCLUSIONS?**

22 A. No. In fact, it is the opposite of the FCC's approach. The FCC concluded
23 that locations and routes served by OC(n) and multiple (3 and above) DS3

1 facilities have significantly different economic characteristics from those
2 served by stand alone dark fiber, DS1, and individual DS3 services. The
3 FCC concluded that CLECs generally can receive enough revenue for
4 OC(n) and multiple DS3 service locations and routes to offset their costs
5 of network construction and installation, and made a national finding of
6 non-impairment for those services. For locations and routes that only
7 support standalone DS1 or DS3 services, the FCC concluded that CLECs
8 cannot receive enough revenue to recover their costs of construction, and
9 made a national finding of impairment that can be overcome on a location
10 or route specific basis by the triggers. If the FCC had intended for any
11 OC(n) level service to count toward the DS1, DS3, and dark fiber triggers,
12 as Ms. Padgett suggests, then it would not have made such a distinction,
13 and simply would have declared no impairment wherever any type of
14 OC(n) service is provided instead of developing the capacity-specific
15 triggers. The fact that the FCC concluded that enough customer demand
16 exists to support OC(n) or 3 DS3 levels of loop or transport is not
17 indicative of a CLEC's ability to provide DS1, DS3 or dark fiber on those
18 routes or at those locations.

19
20 **Q. MS. PADGETT ASSERTS THAT, TO THE EXTENT A CLEC CAN**
21 **DERIVE OR IS DERIVING A DS1 OR DS3 SERVICE FROM AN**
22 **EXISTING OC(N) SYSTEM AT A GIVEN LOCATION, THEN**

1 **THAT LOCATION SATISFIES THE TRIGGER. DID THE FCC**
2 **EXPLICITLY REJECT SUCH AN APPROACH?**

3 A. Yes. In its discussion of impairment for DS1 loops in paragraph 325, the
4 FCC rejected such an arrangement as evidence of self-deployment. In
5 footnote 957, the FCC stated “[w]e note that at least two competitive
6 LECs have provided evidence that they self-provide some DS1 capacity
7 loops to certain customer locations. *See supra* note 859. It is important to
8 note, however, that this evidence of self-provisioning has been possible
9 where that same carrier is already self-provisioning OCn or a 3 DS3 level
10 of loop capacity to that same customer location. Thus, this evidence does
11 not support the ability to self-deploy stand-alone DS1 capacity loops nor
12 does it impact our DS1 impairment finding.”

13
14 **Q. BASED UPON THE FCC’S OWN INTERPRETATION IN**
15 **FOOTNOTE 957, IS IT REASONABLE TO CONCLUDE THAT**
16 **THE FCC INTENDED TO EXCLUDE FROM THE TRIGGERS**
17 **ANY LOCATION OR ROUTE WHERE AN OC(N) OR 3 DS3**
18 **LEVEL OF CAPACITY HAS BEEN DEPLOYED BY A CLEC,**
19 **EVEN IF INDIVIDUAL DS1S OR DS3S HAVE BEEN OR CAN BE**
20 **DERIVED FROM THAT SYSTEM?**

21 A. Yes. The FCC’s impairment analysis is based upon distinguishing
22 locations with high demand for network capacity from those with low
23 demand. The FCC already has assumed that CLECs can self-provision

1 facilities to the "high demand" locations, which was the basis of its
2 impairment analysis. In the FCC's view, a CLEC that has deployed an
3 OC(n) or 3 DS3 level of capacity to a location or a route is merely
4 evidence that the location is a "high demand" location, for which the FCC
5 already has concluded that no impairment exists. The narrower
6 circumstance the FCC is seeking in the triggers are those "low demand"
7 locations for which DS1, DS3, or dark fiber services are being deployed
8 without the benefit of existing OC(n) or 3 DS3 facilities.

9
10 **Q. ON PAGE 25 OF HER TESTIMONY, MS. PADGETT ASSERTS**
11 **THAT THE TRO DOES NOT REQUIRE EVIDENCE THAT CLECS**
12 **ARE OFFERING DEDICATED TRANSPORT SERVICE**
13 **BETWEEN ILEC WIRE CENTERS IN ORDER FOR THE TWO**
14 **WIRE CENTERS TO BE CONSIDERED ENDPOINTS OF A**
15 **DEDICATED TRANSPORT ROUTE. IS MS. PADGETT**
16 **CORRECT?**

17 **A.** No. In paragraph 401 of the *TRO*, in defining a transport route, the FCC
18 states: "[w]e define a route, for purposes of these tests, as a connection
19 between wire center or switch 'A' and wire center or switch 'Z.' Even if,
20 on the incumbent LEC's network, a transport circuit from 'A' to 'Z' passes
21 through an intermediate wire center 'X,' *the competitive providers must*
22 *offer service connecting wire centers 'A' and 'Z,'* but do not have to mirror
23 the network path of the incumbent LEC through wire center 'X.'"

1 (emphasis added). This definition is consistent with the FCC's desire to
2 have market-based evidence as the primary means of identifying routes
3 where there may be no impairment.
4

5 **Q. DOES THE TRO REQUIRE EVIDENCE THAT SERVICE IS**
6 **BEING PROVIDED OR OFFERED AT THE SPECIFIC**
7 **CAPACITY LEVELS CONTEMPLATED BY THE TRO?**

8 A. Yes. Each of the TRO's trigger definitions requires evidence that the
9 CLEC is providing service at that specific capacity level. For example, in
10 describing the self-provisioning trigger in paragraph 329, the FCC states
11 that the ILEC's unbundling obligation can be eliminated "where a specific
12 customer location is identified as being *currently served* by two or more
13 unaffiliated competitive LECs with their own loop transmission facilities
14 *at the relevant loop capacity level.*" (emphasis added). For wholesale
15 triggers, the ILEC's unbundling obligations can be eliminated "where two
16 or more unaffiliated competitive providers have deployed transmission
17 facilities to the location and *are offering* alternative loop facilities to
18 competitive LECs on a wholesale basis *at the same capacity level.*" For
19 transport, in discussing the wholesale trigger definition in paragraph 400,
20 the FCC states, "[s]pecifically, we find that competing carriers are not
21 impaired where competing carriers have available two or more alternative
22 transport providers, not affiliate with each other or the incumbent LEC,
23 *immediately capable and willing to provide transport at a specific*

1 *capacity* along a given route between incumbent LEC switches or wire
2 centers.” (emphasis added). For the self-provisioning transport trigger,
3 the *TRO* anticipates that the test will be performed for specific capacity
4 levels. In the *TRO*, the FCC states “we note that where, through the
5 application of this trigger, impairment for unbundled transport *at a*
6 *particular capacity* is no longer found, substantial competitive transport
7 facilities, and perhaps other capacities of UNE transport will be available.
8 Therefore, if this trigger removes unbundled transport *at a particular*
9 *capacity level*, carriers will remain capable of serving end-user customers
10 in all areas.” *TRO* ¶ 407.

11

12 **Q. ON PAGE 19 OF HER TESTIMONY, MS. PADGETT ASSERTS**
13 **THAT TRAFFIC ROUTED THROUGH A CLEC SWITCH**
14 **SHOULD BE COUNTED AS DEDICATED TRANSPORT. DO YOU**
15 **AGREE?**

16 **A.** No. This type of arrangement is switched transport. Switched transport
17 cannot meet the FCC’s definition of dedicated transport, because the route
18 can not be dedicated to a particular customer or carrier. A dedicated
19 transport route has two endpoints, and traffic only can flow between one
20 endpoint to another endpoint. Switched transport, on the other hand, has
21 at least three endpoints, as the function of the switch is to provide
22 temporary connections between pairs of the numerous endpoints
23 connected to the switch. The “route” in this instance is shared among all

1 carriers and customers that are connected to the switch. This is why
2 switched transport also is generally referred to as "shared transport."
3

4 **Q. DOES THE FCC DISTINGUISH SHARED TRANSPORT FROM**
5 **DEDICATED TRANSPORT IN THE TRO?**

6 A. Yes. In footnote 1100 of the *TRO*, the FCC states that "[w]e refer
7 generically to "transport" in this Part as meaning dedicated transport. We
8 address shared transport in Part VI.E. of this Order."
9

10 **Q. MS. PADGETT RELIES PRIMARILY UPON THE FCC'S USE OF**
11 **THE TERM "SWITCH" IN THE RULES DEFINING A**
12 **TRANSPORT ROUTE. IN WHAT CONTEXT IS THE FCC USING**
13 **THAT TERM?**

14 A. The FCC is using the term switch as an alternative term for wire center
15 and shorthand for "switching center" or "switch location." This is
16 consistent with the use of the term in paragraph 401, in which the FCC
17 defines a route as a connection between wire center or switch "A" and
18 wire center or switch "Z." There are numerous names the industry uses to
19 describe the ILEC building that houses the ILEC's switches and serves as
20 an aggregation point for loop facilities, including "central offices", "end
21 offices", "wire centers", "switching centers", and "switching offices," and
22 it is common to shorten the term switching center to switch to describe
23 such a building.

1 **Q. ON PAGE 14 OF HER TESTIMONY, MS. PADGETT ASSERTS**
2 **THAT IT IS NOT NECESSARY TO DEMONSTRATE THAT A**
3 **CLEC IS OFFERING WHOLESALE SERVICE AT A**
4 **PARTICULAR LOCATION OR ON A GIVEN ROUTE TO MEET**
5 **THE WHOLESALE TRIGGERS. IS THIS CONSISTENT WITH**
6 **THE FCC'S DEFINITION OF THE WHOLESALE TRIGGERS?**

7 **A.** No. The FCC specifically provided that the wholesale triggers require
8 location- or route-specific evidence of an offering of service. In paragraph
9 337 of the *TRO*, in which the FCC defines the wholesale trigger for loops,
10 the FCC states, "[w]here competitive LECs have two alternative choices
11 (apart from the incumbent LEC's network) to purchase wholesale high-
12 capacity loops, including intermodal alternatives, *at a particular premises*,
13 we conclude that impairment does not exist at that location for that type of
14 high-capacity loop." (emphasis added). Likewise, in defining the
15 wholesale trigger for transport in paragraph 400, the FCC states,
16 "[s]pecifically we find that competing carriers are not impaired where
17 competing carriers have available two or more alternative transport
18 providers, not affiliated with each other or the incumbent LEC,
19 immediately capable and willing to provide transport at a specific capacity
20 *along a given route* between incumbent LEC switches or wire centers."
21 (emphasis added). Ms. Padgett's proposal to essentially label every CLEC
22 route and building as wholesale is clearly at odds with the FCC's location-
23 and route-specific requirements.

1 **Q. ON PAGE 7 OF HER TESTIMONY, MS. PADGETT STATES**
2 **THAT A CLEC'S SERVICE SHOULD QUALIFY FOR THE SELF-**
3 **PROVISIONING TRIGGER EVEN IF THE CLEC DOES NOT**
4 **HAVE ACCESS TO THE ENTIRE CUSTOMER LOCATION. IS**
5 **SHE CORRECT?**

6 **A.** No. Ms. Padgett is basing her assertion solely upon her contention that the
7 rule for the wholesale loop trigger explicitly requires that the CLEC has
8 access to the entire customer premises, while the self-provisioning trigger,
9 according to Ms. Padgett, does not state the same in explicit terms. Ms.
10 Padgett ignores the fact that the self-provisioning trigger also has a
11 different set of requirements from the wholesale trigger, and that the FCC
12 is using self-provisioned service as evidence that CLECs can overcome
13 the economic barriers to providing standalone DS3 services. The self-
14 provisioning trigger requires evidence of actual service to a customer
15 location, as opposed to the wholesale trigger, which requires evidence of
16 the ability to serve an entire building. This is a distinct difference for
17 large multi-unit buildings, in that a customer location may be a particular
18 floor within the building. To the extent that the CLEC only has
19 provisioned service to that particular customer location, then there cannot
20 be a finding of non-impairment for the remaining customers and customer
21 locations within the building, and to have the entire building meet the
22 trigger would produce a result that is contrary to the FCC's impairment
23 analysis. Indeed, in the *TRÖ*, the FCC stated that CLECs must "have

1 existing facilities in place serving customers at that location.” TRO ¶ 332.
2 If the CLEC only has provisioned facilities to serve part of the building,
3 then the entire building does not meet this requirement. The appropriate
4 interpretation is for the individual customer location to be counted toward
5 the trigger, but not the entire building.
6

7 **Q. ON PAGE 6 OF HER TESTIMONY, MS, PADGETT STATES**
8 **THAT CLEC LOOPS THAT DO NOT TERMINATE IN A CLEC**
9 **COLLOCATION SHOULD BE COUNTED TOWARDS THE**
10 **WHOLESALE TRIGGER. IS THIS AN APPROPRIATE**
11 **INTERPRETATION?**

12 **A.** No. Ms. Padgett ignores the requirement that wholesale services be made
13 “widely available” to other CLECs. To the extent that wholesale loops are
14 made available at an ILEC wire center, all of the CLECs that have access
15 to that wire center also will have reasonable access to the wholesale
16 CLEC’s loops. As I described above, CLECs generally have configured
17 their networks to utilize unbundled loops at the ILEC wire center. To the
18 extent that a wholesale CLEC requires its customers to extend their
19 networks to a different location, then the wholesale CLEC’s loops would
20 not be widely available, and CLECs would be limited both economically
21 and logistically from using the wholesale service.
22

1 **II. CRITIQUE OF BELL SOUTH'S SELF-PROVISIONING TRIGGER**
2 **ANALYSIS**

3 A. HIGH CAPACITY LOOPS

4 **Q. HAVE YOU REVIEWED BELLSOUTH'S TESTIMONY**
5 **CONCERNING THE APPLICATION OF THE SELF-**
6 **PROVISIONING TRIGGER TO HIGH CAPACITY LOOPS?**

7 A. Yes, I have reviewed the testimony of Shelley W. Padgett regarding High-
8 Capacity Loops beginning on page 2.

10 Q. WHAT WERE BELLSOUTH'S CONCLUSIONS REGARDING
11 THE SELF-PROVISIONING TRIGGER ANALYSIS?

12 A. BellSouth has asserted that six customer locations satisfy the self-
13 provisioning trigger for the DS3 and dark fiber capacity levels. The
14 specific customer locations are listed in Exhibit SWP-3 of Ms. Padgett's
15 testimony.

17 Q. PLEASE DESCRIBE THE PROCESS THAT BELLSOUTH USED
18 TO IDENTIFY HIGH CAPACITY LOOP LOCATIONS FOR ITS
19 SELF-PROVISIONING TRIGGER ANALYSIS.

20 A. BellSouth developed a list of building locations for which it claims
21 competitive providers have deployed fiber optic facilities using discovery
22 responses from the competitive providers and data from GeoResults, a
23 third-party marketing firm. For each building on the list, BellSouth asserts
24 that two or more competitive carriers provide services at the building for

1 both the dark fiber and DS3 capacity levels, and thus claims that the self-
2 provisioning trigger has been met. BellSouth lists the following carriers as
3 self-provisioning trigger providers at one or more locations: *** BEGIN
4 CONFIDENTIAL ***

5
6 *** END CONFIDENTIAL ***

7
8 Q. DID YOU REVIEW ANY OF THE DATA RESPONSES PROVIDED
9 BY THESE CLECS?

10 A. Yes. I reviewed the proprietary responses of *** BEGIN
11 CONFIDENTIAL ***

12 *** END CONFIDENTIAL *** BellSouth
13 relied solely upon GeoResults, a third party marketing firm, as the source
14 for those CLECs.

15
16 Q. BASED ON YOUR REVIEW OF THE CLEC DATA RESPONSES
17 AND BELL SOUTH'S TESTIMONY DO ALL SIX CUSTOMER
18 LOCATION SATISFY THE SELF-PROVISIONING TRIGGER AT
19 EITHER THE DS3 OR DARK FIBER LEVEL?

20 A. No. Based upon the CLEC data responses, only one building, ***
21 BEGIN CONFIDENTIAL ***

22 *** END CONFIDENTIAL *** potentially could meet the
23 self-provisioning trigger. As I discuss below, CLEC discovery responses

1 indicate that certain carriers do not self-provide loops. Furthermore,
2 BellSouth relied on unverified GeoResults data to identify certain CLECs
3 as trigger candidates.
4

5 **Q. FOR WHICH BUILDINGS DID BELL SOUTH RELY UPON**
6 **GEORESULTS TO IDENTIFY ONE OF THE TWO TRIGGER**
7 **CLECS?**

8 A. BellSouth relied upon GeoResults data for 3 of the 6 buildings. As I
9 stated above, BellSouth relied on GeoResults data for *** **BEGIN**
10 **CONFIDENTIAL *****
11
12
13

14 ***** END CONFIDENTIAL *****
15

16 **Q. BASED UPON YOUR REVIEW OF GEORESULTS OUTPUTS IN**
17 **OTHER STATES, DOES GEORESULTS PROVIDE SUFFICIENT**
18 **INFORMATION TO DETERMINE WHETHER CLECS ARE**
19 **PROVIDING SERVICE CONSISTENT WITH THE SELF-**
20 **PROVISIONING OR WHOLESALE TIGGERS?**

21 A. No. GeoResults produces a lengthy list of companies for which it
22 identifies as "Lit CLECs", including retail establishments, banks,
23 enterprise customer locations, paging companies, and long distance

1 resellers. It does not appear to have the intelligence to distinguish actual
2 fiber facilities from those using another carrier's facilities. Therefore, as I
3 discuss below, absent additional information, *** BEGIN

4 **CONFIDENTIAL *****

5 ***** END**

6 **CONFIDENTIAL *****

7
8 **Q. WHAT IS THE RESULT OF REMOVING THESE CARRIERS**
9 **FROM THE LIST OF TRIGGER CANDIDATES AT THESE**
10 **LOCATIONS?**

11 **A. After removing *** BEGIN CONFIDENTIAL *****

12 ***** END CONFIDENTIAL ***** there is only one
13 carrier remaining at each customer location that allegedly self-provides
14 loops. Since the FCC trigger requires two trigger candidates per customer
15 location, none of these locations (1, 3, and 4) satisfy the self-provisioning
16 trigger at any capacity level.

17
18 **Q. HAS ANOTHER ILEC ACKNOWLEDGED THAT GEORESULTS**
19 **FALSELY IDENTIFIES CLECS AS PRESENT IN BUILDINGS**
20 **WHEN THEY ACTAULLY ARE NOT?**

21 **A. Yes. For example, in Illinois, SBC testified that GeoResults had identified**
22 ***** BEGIN CONFIDENTIAL *****

23 ***** END CONFIDENTIAL *****

1 Testimony of Rebecca L. Sparks on Behalf of SBC Illinois, Illinois
2 Commerce Commission, Docket No. 03-0596, at 17 (Feb. 4, 2004).

3
4 **Q. HOW SHOULD THE GEORESULTS DATA BE USED IN THE**
5 **TRIGGER ANALYSES?**

6 A. The data could be used to develop a baseline list of buildings, which then
7 could be presented to the CLECs. The CLECs, in turn, could validate
8 whether the information contained in GeoResults is accurate and whether
9 they are providing the appropriate type and capacity level of service
10 required by the triggers. The Commission, however, should not rely on
11 GeoResults unverified data as the basis for delisting customer locations.

12
13 **Q. WERE THERE OTHER WAYS THAT BELLSOUTH**
14 **INCORRECTLY INCLUDED CLECS AS TRIGGER**
15 **CANDIDATES?**

16 A. Yes. In addition to including carriers based on unverified data from
17 GeoResults, BellSouth also identified carriers as self-provisioners despite
18 information in their discovery responses to the contrary. *** **BEGIN**
19 **CONFIDENTIAL *****

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***** END**

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CONFIDENTIAL *** As a result, there is only one carrier remaining at locations 1, 4, 5, and 6. None of these locations could possibly satisfy the triggers. I will discuss location 3 below.

6

In addition, BellSouth identified ***** BEGIN CONFIDENTIAL**

7

8

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***** END**

13

CONFIDENTIAL ***

14

15

Q. MR. BALL, YOU HAVE ELIMINATED LOCATIONS 1, 4, 5, AND 6 BASED ON CARRIERS' DISCOVERY RESPONSES. SEPARATE AND APART FROM THIS JUSTIFICATION, YOU ALSO ELIMINATED LOCATIONS 1 AND 4 BASED ON BELLSOUTH'S RELIANCE ON GEORESULTS DATA. WHAT ARE YOUR FINDINGS REGARDING LOCATIONS 2 AND 3?

16

17

18

19

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21

A. There is insufficient evidence that either location satisfies the self-deployment trigger at either the DS3 or dark fiber capacity level.

22

23

BellSouth has identified ***** BEGIN CONFIDENTIAL *****

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10 ***** END CONFIDENTIAL ***** BellSouth has not presented evidence
11 that these carriers actually self-provide loops at both the DS3 and dark
12 fiber levels.

13

14 **Q. HOW SHOULD THE COMMISSION PROCEED BASED UPON**
15 **THE EVIDENCE PROVIDED?**

16 **A.** I recommend that no buildings be confirmed as meeting the trigger until
17 the CLECs BellSouth lists as triggers are queried as to whether they
18 actually self-provide service to those buildings in accordance with the
19 requirements of the *TRO*. Included in such a query would be identifying
20 whether the CLECs currently are self-provisioning DS3 loops at the
21 location, whether they are doing so as part of an OC(n) or 3 DS3 level of
22 demand, and whether they have access to all customers in the building.

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B. DEDICATED TRANSPORT

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**Q. HAVE YOU REVIEWED BELL SOUTH'S TESTIMONY
CONCERNING THE APPLICATION OF THE SELF-
PROVISIONING TRIGGER TO DEDICATED TRANSPORT
ROUTES?**

A. Yes, I have reviewed the testimony of Shelley W. Padgett beginning on
page 17.

**Q. WHAT WERE BELL SOUTH'S CONCLUSIONS REGARDING
THE SELF-PROVISIONING TRIGGER ANALYSIS FOR
DEDICATED TRANSPORT?**

A. BellSouth has asserted that one transport route satisfies the self-
provisioning trigger for DS3 service and that four transport routes satisfy
the self-provisioning trigger for dark fiber. The routes are listed in Exhibit
SWP-7 to Ms. Padgett's testimony.

**Q. WHAT WAS THE PROCESS THAT BELL SOUTH USED TO
IDENTIFY DEDICATED TRANSPORT ROUTES THAT IT
CLAIMS SATISFY THE SELF-PROVISIONING TRIGGER?**

A. Similar to her process for loops, BellSouth witness Padgett developed a
list of wire centers at which competitive providers have established
collocation arrangements based upon information that BellSouth gathered
in discovery and through examining its own collocation records.

1 BellSouth then assumed that transport routes exist between each and every
2 collocation arrangement within a given LATA for each individual carrier
3 for both the DS3 and dark fiber capacity levels.

4
5 **Q. DID BELLSOUTH PERFORM THE APPROPRIATE ANALYSIS**
6 **TO DEMONSTRATE THAT THE SELF-PROVISIONING**
7 **TRIGGERS WERE SATISFIED FOR DEDICATED TRANSPORT?**

8 A. No. BellSouth's analysis relies almost exclusively upon the "connect the
9 dots" approach, in which it simply asserts that a transport route exists
10 between each and every CLEC wire center collocation even if the CLEC
11 itself denies or does not indicate that it provides a dedicated transport
12 route between the two wire centers. Additionally, BellSouth relies almost
13 solely upon its own unverified collocation records for all but one of the
14 CLECs, an approach that has been highly inaccurate in other states. As a
15 result, there are no routes for which there are three or more CLECs who
16 have acknowledged self-provisioning dedicated transport, at either the
17 DS3 or dark fiber capacity level. Thus, there are no routes that meet the
18 self-provisioning trigger for dedicated transport.

19
20 **Q. WHICH CLECS DID BELLSOUTH NAME AS SELF-**
21 **PROVISIONERS OF DEDICATED TRANSPORT IN SOUTH**
22 **CAROLINA?**

1 A. In BellSouth Exhibit SWP-8, BellSouth identifies the following CLECs as
2 trigger candidates: ***** BEGIN CONFIDENTIAL *****

3
4 ***** END CONFIDENTIAL *****

5
6 **Q. DID BELL SOUTH RELY UPON THE DISCOVERY RESPONSES**
7 **OF THESE CLECS IN DEVELOPING ITS LIST OF SELF-**
8 **PROVISIONED TRANSPORT ROUTES?**

9 A. No. In BellSouth Exhibit SWP-14, BellSouth represents that it relied
10 primarily upon its own unverified internal data for the following CLECs:

11 ***** BEGIN CONFIDENTIAL ***** *******
12 **END CONFIDENTIAL *****

13
14 **Q. IS IT APPROPRIATE FOR BELL SOUTH TO IDENTIFY A**
15 **ROUTE BASED SOLELY UPON ITS COLLOCATION RECORDS?**

16 A. No. BellSouth does not have enough information to make a determination
17 that a transport route satisfies the self-provisioning trigger based solely on
18 its collocation records. For example, collocation records do not indicate
19 whether the carrier actually provides a transport service between those
20 collocations. BellSouth also does not have information about the capacity
21 level at which the carrier provides service, if any, or whether the service is
22 self-provisioned or wholesale.

23

1 **Q. HAS BELLSOUTH IDENTIFIED "FALSE ROUTES" IN OTHER**
2 **STATES BASED UPON FAULTY INTERNAL COLLOCATION**
3 **RECORDS?**

4 **A. Yes. As one example, in Florida, BellSouth *** BEGIN**
5 **CONFIDENTIAL *****

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***** END**

15 **CONFIDENTIAL ***** Therefore, BellSouth should not have included
16 dedicated transport routes between those collocations.

17

18 **Q. SHOULD BELLSOUTH HAVE INCLUDED ALL OF THESE**
19 **CLECS AS TRIGGERS BASED UPON YOUR REVIEW OF THEIR**
20 **DATA RESPONSES?**

21 **A. No. It is inappropriate to include any of the CLECs that do not**
22 acknowledge self-provisioning transport between the ILEC wire centers.
23 As I explained earlier in my testimony, "connecting the dots" between

1 CLEC collocation arrangements is not an appropriate means of identifying
2 self-provisioned transport routes. In particular, in its discovery responses,

3 ***** BEGIN CONFIDENTIAL *****

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***** END CONFIDENTIAL *****

9

10 **Q. DID ANY OF THE CLECS THAT BELLSOUTH LISTED AS**
11 **TRIGGERS ACKNOWLEDGE PROVIDING DEDICATED**
12 **TRANSPORT BETWEEN WIRE CENTERS?**

13 **A. Yes. ***BEGIN CONFIDENTIAL *****

14

15

***** END CONFIDENTIAL *****

16

17 **Q. HAS BELLSOUTH DEMONSTRATED THAT THE SELF-**
18 **PROVISIONING TRIGGER IS SATISFIED AT THE DS3 LEVEL**
19 **ON ROUTE 6?**

20 **A. No. As I stated above, BellSouth claims that one route satisfies the self-**
21 **provisioning trigger for DS-3 transport. See Padgett Direct, Exhibit SWP-**
22 **9. For simplicity, I will refer to this route as route 6. BellSouth identifies**
23 **three carriers on this route: *** BEGIN CONFIDENTIAL *****

1

2

3

END CONFIDENTIAL *** Therefore, only two carriers remain,

4

leaving the trigger unsatisfied.

5

6 Q.

HAS BELLSOUTH DEMONSTRATED THAT THE SELF-

7

PROVISIONING TRIGGER IS SATISFIED AT THE DARK FIBER

8

LEVEL ON ROUTES 6, 9, 10, AND 11?

9 A.

No. BellSouth lists *** **BEGIN CONFIDENTIAL *****

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*** END CONFIDENTIAL ***

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5 **Q. HOW SHOULD THE COMMISSION PROCEED WITH THE**
6 **EVIDENCE PROVIDED?**

7 A. The Commission should not delist any routes based upon the incomplete
8 evidence provided by BellSouth.
9

10 **III. CRITIQUE OF BELL SOUTH SOUTH CAROLINA WHOLESALE**
11 **TRIGGER ANALYSES**

12 **A. HIGH CAPACITY LOOPS**

13 **Q. HAVE YOU REVIEWED BELL SOUTH'S TESTIMONY**
14 **CONCERNING THE APPLICATION OF THE WHOLESALE**
15 **TRIGGER TO HIGH CAPACITY LOOPS?**

16 A. Yes, I have reviewed the testimony of Shelley W. Padgett beginning on
17 page 12.
18

19 **Q. WHAT WERE BELL SOUTH'S CONCLUSIONS REGARDING**
20 **THE WHOLESALE TRIGGER ANALYSIS?**

21 A. BellSouth has asserted that five of the six buildings that it claims satisfy
22 the self-provisioning trigger also satisfy the wholesale facilities trigger at
23 the DS1 and DS3 levels. See Padgett Direct, Exhibits SWP-2 and SWP-4.
24

1 **Q. DO YOU AGREE WITH BELL SOUTH'S CONCLUSIONS?**

2 A. No. Based upon my review of the CLEC data responses, there is no
3 evidence whatsoever that any of the CLECs listed for these buildings offer
4 wholesale service at either the DS1 or DS3 capacity level, have access to
5 the entire building as required by the *TRO*, or have put in place the
6 network capacity and back office systems necessary to provide an offering
7 consistent with the requirements of the *TRO*.

8

9 **Q. WHAT WAS THE PROCESS BELL SOUTH USED TO IDENTIFY**
10 **THE BUILDINGS THAT IT CLAIMS SATISFY THE**
11 **WHOLESALE TRIGGER?**

12 A. On page 13 of Ms. Padgett's testimony, Ms. Padgett lists the broad range
13 of sources that she used to identify carriers as wholesalers, including
14 CLEC discovery responses, BellSouth's "experience" in losing wholesale
15 contracts, carriers' advertisements, carriers' public statements, and analyst
16 and industry reports. Ms Padgett then continues with a creative assertion
17 that the carrier does not even have to be currently selling wholesale
18 service to qualify for the wholesale trigger. Instead, according to Ms.
19 Padgett, the carrier simply needs to express some sort of "willingness" to
20 provide wholesale services. Under BellSouth's view, everyone is a
21 wholesaler, whether they realize it or not.

22

1 **Q. DOES THE *TRO* ALLOW FOR CLECS TO BE DECLARED**
2 **WHOLESALERS AGAINST THEIR WILL?**

3 A. No. The intent of the *TRO* and the wholesale triggers is to identify
4 locations where CLECs have made an affirmative business decision to
5 provide wholesale services, and have implemented the appropriate
6 network configurations and back office support systems to provide a
7 comparable service to that provided by the UNE that is being replaced. In
8 paragraph 337 of the *TRO*, the FCC provides the numerous requirements
9 that a CLEC must meet to be a wholesaler for the purposes of the trigger:
10 “where the relevant state commission determines that two or more
11 unaffiliated alternative providers...offer an equivalent wholesale loop
12 product at a comparable level of capacity, quality, and reliability, have
13 access to the entire multiunit customer premises, and offer the specific
14 type of high-capacity loop over their own facilities on a widely available
15 wholesale basis to other carriers desiring to service customers at that
16 location, then incumbent LEC loops at the same loop capacity level
17 serving that particular building will no longer be unbundled.” Clearly, the
18 FCC is intending to identify CLECs who have chosen to provide
19 wholesale service to the given locations, and have implemented the
20 necessary network and back-office systems to provide such services.

21

1 **Q. DID THE FCC REQUIRE EVIDENCE OF BACK OFFICE**
2 **SUPPORT SYSTEMS TO QUALIFY A CLEC AS A**
3 **WHOLESALE?**

4 **A.** Yes. In making its determination that there is “scant evidence of
5 wholesale alternatives for serving customers at the DS1 level” in
6 paragraph 325, the FCC concluded that, “[t]he record indicates that even
7 competitive carriers that have deployed their own loop facilities do not
8 have the back office support systems in place that are necessary to offer
9 any excess capacity on a wholesale basis to other competitive LECs.” *See*
10 *TRO* at note 958.

11
12 **Q. WHY IS IT IMPORTANT THAT THE WHOLESALE TRIGGER**
13 **BE TREATED SEPARATELY FROM THE SELF-PROVISIONING**
14 **TRIGGER AND THAT CARE BE TAKEN TO AVOID**
15 **INCORRECTLY LABELING A CARRIER AS A WHOLESALE?**

16 **A.** Unlike the self-provisioning trigger, the wholesale trigger includes access
17 to loops at the DS1 capacity level, meaning that CLECs potentially could
18 be denied access to those loops if the wholesale trigger were met despite
19 the FCC’s finding that it is practically impossible for a CLEC to
20 economically provision a standalone DS1 loop. DS1 loops are the primary
21 means of provisioning service to medium-size enterprise customers for
22 CLECs, and denial of DS1-loops would be a severe impediment to the
23 CLEC’s ability to provide competitive services.

1 **Q. DID BELLSOUTH PROPERLY VERIFY THE AVAILABILITY OF**
2 **DS1 LOOP SERVICES ON A WHOLESALE BASIS FOR THE**
3 **BUILDINGS IT LISTED?**

4 **A.** No. According to BellSouth witness Padgett, BellSouth made an
5 assumption that any existing fiber facility can provide DS1 level service,
6 and that the appropriate level of customer demand exists to support
7 standalone DS1 loops. This assumption is incorrect. DS1-level service
8 only can be provided when a fiber facility has been equipped with the
9 appropriate electronics, including an optical multiplexer with the
10 capability of provisioning DS1 channels. The FCC was clear in its
11 requirement that wholesale service must be available at the specific
12 capacity level in order for the trigger to be satisfied.

13
14 **Q. DID THE FCC ANTICIPATE THAT A VERY SMALL NUMBER**
15 **OF BUILDINGS WOULD SATISFY THE WHOLESALE**
16 **TRIGGERS?**

17 **A.** Yes. In paragraph 338 of the TRO, the FCC states, “[w]e recognize that,
18 while the record indicates that there are presently a limited number of
19 alternative wholesale loop providers serving multiunit premises, we
20 anticipate that a competitive market will continue to *develop*.” (emphasis
21 added).

22

1 **Q. DO ALL OF THE CUSTOMER LOCATIONS THAT BELLSOUTH**
2 **HAS IDENTIFIED SATISFY THE WHOLESALE TRIGGER FOR**
3 **LOOPS AT THE DS1 AND DS3 CAPACITY LEVELS?**

4 **A.** No. BellSouth lists some locations based solely on unverified GeoResults
5 data. In addition, BellSouth has included as "wholesale carriers" carriers
6 that do not provide wholesale loops. These carriers should not count for
7 purposes of the triggers.

8

9 **Q. HAS BELLSOUTH IDENTIFIED CARRIERS AS TRIGGER**
10 **CANDIDATES THAT DO NOT PROVIDE WHOLESALE LOOPS?**

11 **A.** Yes. *** BEGIN CONFIDENTIAL ***

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21 **Q. SHOULD OTHER LOCATIONS BE EXCLUDED FROM THE LIST**
22 **OF CUSTOMER LOCATIONS WHERE THE WHOLESALE**
23 **TRIGGER IS SATISFIED?**

1 A. Yes, locations 1 and 4 also should be removed. As I stated above, absent
2 independent verification from the carriers themselves, BellSouth should
3 not be permitted to rely on unverified GeoResults data. Therefore, ***

4 **BEGIN CONFIDENTIAL *****

5 ***** END CONFIDENTIAL ***** should be removed from the
6 list of trigger candidates. Doing so leaves only one carrier at these
7 locations, which is insufficient to satisfy the triggers.

8

9 **Q. ARE THERE ANY LOCATIONS THAT SATISFY THE**
10 **WHOLESALE TRIGGER?**

11 A. It is possible that locations 3 and 6 satisfy the wholesale trigger. The
12 Commission would need to confirm that *** **BEGIN CONFIDENTIAL**
13 ***

14 ***** END CONFIDENTIAL *****

15

16 **B. DEDICATED TRANSPORT**

17 **Q. HAVE YOU REVIEWED BELL SOUTH'S TESTIMONY**
18 **CONCERNING THE APPLICATION OF THE WHOLESALE**
19 **TRIGGER TO DEDICATED TRANSPORT ROUTES?**

20 A. Yes, I have reviewed the testimony of Shelley W. Padgett beginning on
21 page 29.

22

1 **Q. WHAT WERE BELLSOUTH'S CONCLUSIONS REGARDING**
2 **THE WHOLESALE TRIGGER ANALYSIS?**

3 A. BellSouth claims that 11 routes meet the wholesale DS1 trigger, 6 routes
4 meet the wholesale DS3 trigger, and 9 routes meet the wholesale dark
5 fiber trigger. *See* Padgett Direct, Exhibits SWP-7-10.

6
7 **Q. PLEASE DESCRIBE THE PROCESS BELLSOUTH USED TO**
8 **IDENTIFY DEDICATED TRANSPORT ROUTES THAT IT**
9 **CONTENDS SATISFY THE WHOLESALE PROVISIONING**
10 **TRIGGER.**

11 A. BellSouth used the same "connect the dots" approach to collecting data
12 that I describe above in my critique of the self-provisioning trigger, and
13 used the same broad-brush approach to identify wholesale service
14 providers as it used for loops, essentially assuming without supporting
15 evidence that every competitive transport provider is providing wholesale
16 on each and every route.

17
18 **Q. DOES BELLSOUTH HAVE AN INCENTIVE TO BE OVERLY**
19 **BROAD IN ITS IDENTIFICATION OF WHOLESALE**
20 **TRANSPORT ROUTES?**

21 A. Yes. First, similar to the wholesale trigger for loops, routes that meet the
22 wholesale trigger also are eligible to have DS1-level transport delisted,
23 which is not possible under the self-provisioning trigger. Additionally,

1 since the wholesale trigger for dedicated transport only requires evidence
2 of two competing providers, as opposed to the three for the self-
3 provisioning trigger, BellSouth can increase the total number of routes to
4 be delisted if it can certify that the providers are wholesalers instead of
5 self-provisioners.

6
7 **Q. DOES BELLSOUTH'S ANALYSIS OF THE WHOLESALE**
8 **TRIGGERS FOR TRANSPORT SATISFY THE FCC**
9 **REQUIREMENTS?**

10 A. No. BellSouth's analysis of the wholesale trigger for transport
11 incorporates all of the flaws of the self-provisioning analysis mentioned
12 above.

13
14 **Q. HOW MANY ROUTES MAY BE ELIGIBLE FOR THE**
15 **WHOLESALE TRIGGER?**

16 A. Based on my review of the CLEC data responses, none of the routes
17 proposed by BellSouth qualify for the wholesale trigger. As I stated
18 above, for certain carriers BellSouth relies solely on its own collocation
19 records to support its claim that the wholesale facilities trigger is satisfied.
20 Indeed, in some instances, BellSouth ignored a carrier's discovery
21 responses and supplemented its own unverified collocation records. These
22 records cannot form the basis for delisting transport routes.

23

1 Q. SEPARATE AND APART FROM THE ISSUE OF REMOVING
2 ROUTES ON THE BASIS THAT BELL SOUTH RELIED ON ITS
3 COLLOCATION RECORDS, DO THE CARRIERS' DISCOVERY
4 RESPONSES PROVIDE AN INDEPENDENT BASIS TO REMOVE
5 CERTAIN ROUTES?

6 A. Yes. *** BEGIN CONFIDENTIAL ***

7

8

9 *** END CONFIDENTIAL *** At least one of

10 these carriers is listed on routes 1, 2, 3, 6, 7, 8, 9, 10, and 11. After
11 removing these carriers from the list of trigger candidates, only one carrier
12 remains on routes 1, 2, 3, 6, 7, and 8. Therefore, it is not possible that
13 these routes could satisfy the triggers.

14

15 Q. ARE THERE ANY ROUTES THAT SATISFY THE WHOLESALE
16 TRIGGER FOR DEDICATED TRANSPORT?

17 A. There is no conclusive evidence that any route satisfies the trigger. After
18 removing the carriers that deny providing wholesale transport from the list
19 of trigger candidates, it is possible that six routes satisfy the wholesale
20 trigger for DS1, two routes satisfy the wholesale trigger for DS3, and three
21 routes satisfy the dark fiber trigger. As I stated above, both *** BEGIN
22 CONFIDENTIAL ***

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10 **END CONFIDENTIAL *****

11

12 **Q. WHAT FURTHER INFORMATION WOULD NEED TO BE**
13 **GATHERED TO DETERMINE WHETHER ANY OF THE**
14 **ROUTES ADVOCATED BY BELL SOUTH ACTUALLY MEET**
15 **THE WHOLESALE TRIGGER?**

16 **A.** First, an evaluation must be made as to whether the CLECs currently are
17 equipped and operationally ready to provide dedicated transport on the
18 route at the relevant capacity level. Second, evidence must be gathered as
19 to whether the CLEC is willing and capable of immediately providing
20 wholesale service to another CLEC, including whether the CLEC has
21 implemented all of the necessary back office systems necessary to provide
22 such a service.

23

1 **IV. POTENTIAL DEPLOYMENT ANALYSIS FOR HIGH-CAPACITY**
2 **LOOPS AND DEDICATED TRANSPORT**

3 **Q. PLEASE DESCRIBE WHAT IS MEANT BY POTENTIAL**
4 **DEPLOYMENT.**

5 **A.** The potential deployment analysis essentially provides that BellSouth may
6 attempt to demonstrate that no impairment exists for loop locations or
7 transport routes even though the self-provisioning trigger has not been
8 satisfied.

9
10 **Q. ARE DS1-CAPACITY LEVEL LOOPS AND TRANSPORT**
11 **ELIGIBLE FOR A POTENTIAL DEPLOYMENT CLAIM?**

12 **A.** No. The FCC defined potential deployment as a theoretical substitute for
13 the self-provisioning trigger. As such, only those capacity levels eligible
14 for the self-provisioning trigger (DS3 and dark fiber) are eligible for
15 potential deployment claims.

16
17 **Q. CAN AN ILEC MAKE A GENERAL CLAIM FOR POTENTIAL**
18 **DEPLOYMENT, SUCH AS A CLAIM THAT NO IMPAIRMENT**
19 **EXISTS FOR ALL BUILDINGS SERVED OUT OF A WIRE**
20 **CENTER?**

21 **A.** No. The FCC's language is clear that potential deployment claims must
22 be location- or route-specific.

23

1 **Q. WHAT TYPE OF DEMONSTRATION MUST BELLSOUTH MAKE**
2 **TO SUCCESSFULLY PROVE NO IMPAIRMENT EXISTS AT A**
3 **LOCATION OR ROUTE EVEN THOUGH THE TRIGGERS HAVE**
4 **NOT BEEN MET?**

5 A. BellSouth must demonstrate *for each specific customer location and route*
6 that, contrary to the FCC's impairment determination, multiple
7 competitive providers would be able to overcome the significant
8 operational and economic barriers identified by the FCC and still be able
9 to compete successfully. BellSouth therefore must demonstrate that the
10 competitive providers would earn sufficient revenues relative to their
11 significant fixed and sunk costs of providing dark fiber loops or transport,
12 and fewer than two DS3s of traffic for loops or 12 DS3s of traffic for
13 transport (the maximum amount of capacity that CLECs may purchase as
14 UNEs) or dark fiber loops and dedicated transport to cover the costs.
15 Again, this demonstration must be location-specific.

16
17 **Q. WHAT ARE THE FACTORS THAT BELLSOUTH MUST**
18 **DEMONSTRATE TO THE COMMISSION TO SATISFY THE**
19 **POTENTIAL DEPLOYMENT TEST FOR HIGH CAPACITY**
20 **LOOPS TO A SPECIFIC CUSTOMER LOCATION?**

21 A. In paragraph 335 of the *TRO*, the FCC requires that "when conducting its
22 customer location specific analyses, a state must consider and may also
23 find no impairment at a particular customer location even when this

1 trigger has not been facially met *if* the state commission finds that no
2 material economic or operational barriers at a customer location preclude
3 competitive LECs from economically deploying loop transmission
4 facilities to that particular customer location at the relevant loop capacity
5 level. In making a determination that competitive LECs *could*
6 economically deploy loop transmission facilities at that location at the
7 relevant capacity level, the state commission must consider numerous
8 factors affecting multiple CLECs' ability to economically deploy facilities
9 at that particular customer location." In the *TRO*, the FCC then lists the
10 following factors:

- 11 • Evidence of alternative loop deployment at that particular customer
12 location;
- 13 • Local engineering costs of building and using transmission
14 facilities;
- 15 • The cost of underground or aerial laying of fiber or copper;
- 16 • The cost of equipment needed for transmission;
- 17 • Installation and other necessary costs involved in setting up
18 service;
- 19 • Local topography such as hills and rivers;
- 20 • Availability of reasonable access to rights-of-way;
- 21 • Building access restrictions/costs; and
- 22 • Availability/feasibility of similar quality/reliability alternative
23 transmission technologies at that particular location.

24 *TRO* ¶ 335.
25
26

1 **Q. WHAT ARE THE FACTORS THAT BELLSOUTH MUST**
2 **DEMONSTRATE TO THE COMMISSION TO SATISFY THE**
3 **POTENTIAL DEPLOYMENT TEST FOR DEDICATED**
4 **TRANSPORT ROUTES?**

5 **A.** For transport, the FCC also found that actual deployment is the best
6 indicator of impairment, but noted that a state commission must also
7 consider potential deployment for a particular route “that it finds is
8 suitable for ‘multiple, competitive supply,’ but along which [the actual
9 deployment] trigger is not facially satisfied.” *Id.* ¶ 410. The factors that
10 the Commission must evaluate for transport are similar to those for loops
11 and include the following characteristics:

- 12 • Local engineering costs of buildings and utilizing transmission
13 facilities;
- 14 • The cost of underground or aerial laying of fiber;
- 15 • The cost of equipment needed for transmission;
- 16 • Installation and other necessary costs involved in setting up
17 service;
- 18 • Local topography such as hills and rivers;
- 19 • Availability of reasonable access to rights-of-way;
- 20 • The availability or feasibility of alternative transmission
21 technologies with similar quality and reliability;
- 22 • Customer density or addressable market; and
- 23 • Existing facilities-based competition.

24 *TRO* ¶ 410.

1 Each of these characteristics must be evaluated in the potential
2 deployment analysis. For that reason, an ILEC that claims that CLECs are
3 not impaired without access to UNEs in serving a specific route will need
4 to introduce evidence with respect to each factor that demonstrates that the
5 factor alone, or in combination with others, does not operate as a barrier to
6 the CLECs' ability to deploy the facilities in question.

7
8 **Q. WITH RESPECT TO BOTH HIGH CAPACITY LOOPS AND**
9 **DEDICATED TRANSPORT, WHAT EVIDENCE MUST**
10 **BELLSOUTH OFFER WITH RESPECT TO CAPACITY LEVELS?**

11 A. Any evidence an ILEC presents on potential deployment necessarily will
12 have to address the limitations on the availability of UNEs that are *already*
13 *built* into the FCC's new unbundling rules. Thus, with respect to loops,
14 BellSouth's factual showing and analysis concerning potential deployment
15 needs to explain how CLECs are not impaired in their ability to deploy
16 dark fiber loops or up to two DS3 loops at a specific customer location.
17 *TRO* ¶ 324. Similarly, with respect to transport, BellSouth's analysis must
18 reflect the FCC's decision that CLECs are impaired without unbundled
19 access to dark fiber transport and twelve or fewer DS3s of transport along
20 any given transport route. *TRO* ¶ 388.

21
22 **Q. DO YOU THINK IT IS LIKELY THAT MOST ILECS WOULD BE**
23 **ABLE TO MAKE THIS SHOWING?**

1 A. It is difficult to see how an ILEC would make such a detailed and site-
2 specific showing. The FCC already has restricted the availability of loop
3 and transport UNEs by placing strict limits on the capacity levels (2 DS3s
4 for loops, 12 DS3s for transport) that any individual CLEC may obtain at a
5 given location. The record before the FCC contained overwhelming
6 evidence, summarized in the *TRO*, that CLECs remain impaired without
7 the limited access granted by the *TRO* to UNEs at these lower-capacity
8 levels, because “the potential revenue stream associated” with lower-
9 capacity facilities “is many times smaller than that” of a higher-capacity
10 facility. *TRO* ¶ 320 n.945. These lower revenues are highly unlikely to
11 cover the high fixed and sunk costs of facilities deployment, *id.*, and
12 compound the “other economic and operational barriers” that CLECs face
13 in deploying their own facilities. *TRO* ¶ 320 & n. 946; *see, e.g., TRO* ¶¶
14 205-07, 298-99 & n.860, 302-06, 324-27 & n.954, 360, 370-71, 376, 381-
15 93, 399. Moreover, loop economics depend upon certain best-case
16 assumptions – such as the existence of a fiber transport ring with an access
17 point (that is, a point where a lateral line may be attached to an add/drop
18 multiplexer to allow interconnection between the loop facility and the
19 fiber ring) close to the building in question – that may not be satisfied at
20 any given location. Finally, no one seriously contests that “build it and
21 they will come” is anything but a failed entry strategy, and that CLECs
22 therefore need access to UNEs or wholesale capacity at some minimum

1 threshold level in order to obtain a customer base sufficient to support the
2 building of their own facilities.

3 Therefore, to demonstrate potential deployment in accordance with
4 the *TRO*, the ILEC would have to show – for each particular building or
5 transport route – that the revenues available to a CLEC at that location
6 would be sufficient to overcome the fixed and sunk costs of constructing a
7 facility at that location (taking into account all the location-specific
8 variables listed by the FCC) that affect those costs and revenues. In
9 addition, the ILEC’s evidence also would need to show that no other
10 economic and operational barriers exist for the particular location or route
11 in question. The inherent limitations of fixed, low-capacity facilities to
12 generate adequate revenues to cover the high costs of loop deployment
13 make it highly unlikely that any ILEC could make the requisite showing
14 for any individual location or route. And the universal nature of entry
15 barriers such as gaining necessary rights of way, gaining adequate
16 building access, deploying the facilities, and convincing customers to
17 accept the delays inherent in service provided over new facilities, make it
18 even more doubtful that ILECs could provide evidence for *specific*
19 locations that would overcome the FCC’s findings of impairment and
20 demonstrate instead that there could be “multiple competitive supply” so
21 that competition can be effectively served by denying CLECs access to
22 unbundled facilities at locations where CLECs have not found it
23 economical or desirable to deploy their own facilities.

1

2 **V. CRITIQUE OF BELL SOUTH SOUTH CAROLINA POTENTIAL**
3 **DEPLOYMENT ANALYSIS**

4 **A. HIGH CAPACITY LOOPS**

5 **Q. HAVE YOU REVIEWED BELL SOUTH'S TESTIMONY**
6 **CONCERNING THE APPLICATION OF THE POTENTIAL**
7 **DEPLOYMENT ANALYSIS TO HIGH CAPACITY LOOPS?**

8 **A. Yes, I have reviewed the testimony of Aniruddha (Andy) Banerjee.**

9

10 **Q. WHAT WERE THE CONCLUSIONS OF THE POTENTIAL**
11 **DEPLOYMENT ANALYSIS AS PROVIDED BY BELL SOUTH?**

12 **A. BellSouth, through Dr. Banerjee's testimony, has asserted that 38**
13 **customer locations satisfy the potential deployment analysis for high**
14 **capacity loops.**

15

16 **Q. DO YOU BELIEVE IT IS CREDIBLE THAT THERE ARE MORE**
17 **THAN SIX TIMES MORE BUILDINGS THAT BELL SOUTH**
18 **CLAIMS QUALIFY FOR POTENTIAL DEPLOYMENT THAN**
19 **BELL SOUTH IDENTIFIED FOR SELF-PROVISIONING?**

20 **A. No. The current scope of CLEC networks represents more than 10 years**
21 **of laborious efforts by individual companies, who have pieced together**
22 **their networks building by building, working through the myriad issues**
23 **facing companies that perform construction tasks in major city areas. At**
24 **most of those buildings for which some form of service is being provided,**

1 installation of CLEC facilities were most likely economically justified
2 based upon the provision of OC(n) level services. Also, it is likely that the
3 remaining buildings (the ones not served by CLEC facilities) either are not
4 as attractive due to the type of customers in the building, or the
5 competitive providers have been dissuaded from entry due to other
6 barriers such as building access or other building-specific issues. Finally,
7 in the current financial environment, competitive carriers do not have the
8 same level of available financing as they did in the previous years to
9 justify new construction. It defies the realities of today's
10 telecommunications marketplace – as well as basic common sense – to
11 believe that, with all of these considerations, CLECs would be able to
12 economically build out to even a small percentage of the buildings listed
13 by BellSouth for the sole purpose of provisioning only one or two DS3s of
14 capacity or providing dark fiber, let alone six times that number of
15 buildings.

16
17 **Q. PLEASE DESCRIBE, BASED UPON WITNESS BANERJEE'S**
18 **TESTIMONY, THE PROCESS BELLSOUTH USED TO**
19 **DETERMINE THAT 38 BUILDINGS SATISFIED THE**
20 **POTENTIAL DEPLOYMENT ANALYSIS FOR HIGH CAPACITY**
21 **LOOPS.**

22 **A.** Dr. Banerjee developed a list of buildings that had a monthly
23 “telecommunications spend” of \$5,000 or more, or \$60,000 annually. To

1 obtain an estimate of building spending levels, Dr. Banerjee used data it
2 obtained from TNS Telecoms, a third-party market research firms. For
3 each building, Dr. Banerjee then performed what he described as a net
4 present value analysis on each building based upon hypothetical cost
5 assumptions. Buildings that had a positive net present value based upon
6 his assumptions were then presumed to pass the potential deployment
7 analysis.

8

9 **Q. DO YOU BELIEVE THAT THE PROCESS BELL SOUTH USED**
10 **COMPLIES WITH THE STANDARDS THE FCC SET FORTH IN**
11 **THE TRO?**

12 A. No. Even before any analysis of the cost or revenue information provided
13 by BellSouth is considered, it appears that BellSouth simply is performing
14 the wrong analysis. Instead of identifying those buildings for which the
15 costs of providing 2 DS3 loops is less than the expected revenues,
16 BellSouth appears to have identified buildings for which it believes there
17 is a demand for at least 3 DS3s. These locations are not relevant to the
18 analysis, as the FCC has already made the determination that no
19 impairment exists for locations that demand 3 or more DS3s.

20

21 **Q. WHAT IS THE BASIS OF YOUR BELIEF THAT BELL SOUTH IS**
22 **IDENTIFYING BUILDINGS THAT HAVE DEMAND FOR AT**
23 **LEAST 3 DS3S WORTH OF CAPACITY?**

1 A. Typically, the monthly revenue associated with an individual DS3 loop is
2 in the range of \$1,000 to \$2,000 depending upon how long a commitment
3 a customer makes. If it is assumed that a CLEC will receive at least
4 \$5,000 per month, that is indicative of at least 3 DS3s, for which the FCC
5 has already concluded that sufficient revenue exists to recover the cost of
6 loop deployment.

7

8 **Q. CAN YOU PROVIDE AN EXAMPLE OF HOW AN**
9 **APPROPRIATE ANALYSIS SHOULD HAVE BEEN**
10 **PERFORMED?**

11 A. Yes. Assuming a CLEC could expect to receive \$15,000 per year in
12 revenue for a DS3 loop, the maximum revenue it could receive for two
13 DS3s would be \$30,000 per year. The potential deployment analysis
14 would then attempt to locate buildings such that a CLEC's annualized cost
15 of deploying loops, as defined through the FCC's factors, does not exceed
16 \$30,000.

17

18 **Q. APART FROM THE MISGUIDED APPROACH AND LACK OF**
19 **GRANULARITY IN BELLSOUTH'S ANALYSIS, WHAT ARE**
20 **SOME OF THE SPECIFIC CRITICISMS YOU HAVE OF**
21 **BELLSOUTH'S APPROACH ON LOOP POTENTIAL**
22 **DEPLOYMENT?**

1 A. I have several specific criticisms. First, BellSouth does not analyze any of
2 the building-specific factors listed in the *TRO* for any of the buildings it
3 has identified. Second, BellSouth's use of a building's "total telecom
4 spend" is an inappropriate means of identifying potential buildings, and it
5 is also inappropriate to assume the "total telecom spend" of a building as
6 potential revenue a CLEC could expect to receive. Third, the cost figures
7 BellSouth relies upon are flawed, in that they assume practically no cost of
8 fiber construction. Finally, several key assumptions used in Dr.
9 Banerjee's Net Present Value analysis, notably the project life and
10 discount rates, are inappropriate and have the result of inflating the
11 resulting net present value of each building location.

12
13 **Q. DO YOU BELIEVE THAT THE PROCESS BELL SOUTH USED**
14 **COMPLIES WITH THE GUIDANCE THE FCC PROVIDED IN**
15 **THE *TRO*?**

16 A. No. BellSouth's process is the exact opposite of what the FCC specified in
17 the *TRO*. The FCC made clear that, with respect to both the triggers and
18 to potential deployment analysis, "a more granular analysis should be
19 applied on a *customer-by-customer location basis*." *TRO* ¶ 328 (emphasis
20 added). It bears repeating that this granular analysis was to be conducted
21 on a building-by-building basis in order to identify those limited instances
22 in which multiple alternative loop deployment was possible even though it
23 had not yet taken place. BellSouth, however, has attempted to "de-

1 granularize" this analysis by instead developing a list of generic criteria
2 that it then applied equally to hundreds of customer locations. But these
3 generic criteria do not address or even take into account, the specific
4 factors identified in the *TRO*. For example, two factors that the *TRO*
5 requires to be evaluated for each building are (1) availability of rights-of-
6 way and (2) building access restrictions; BellSouth's testimony does not
7 evaluate these factors for even a single building on its potential
8 deployment list.

9
10 **Q. IS BELLSOUTH'S USE OF A BUILDING'S ESTIMATED TOTAL**
11 **ANNUAL TELECOMMUNICATIONS SPENDING, IN THIS**
12 **INSTANCE \$60,000, AN APPROPRIATE WAY OF IDENTIFYING**
13 **BUILDINGS FOR THE POTENTIAL DEPLOYMENT ANALYSIS?**

14 **A.** No. The appropriate approach should be to determine whether a building
15 has sufficient demand for DS3 or dark fiber loops to allow for multiple,
16 competitive supply into the building. A large building (or even a single
17 customer in that building) easily could surpass the \$60,000 threshold
18 without having any demand whatsoever for DS3 or dark fiber loops.
19 BellSouth should have the capability based upon its own customer records
20 to determine which buildings actually have a demand for the specific
21 capacity levels, the number of which should be significantly less than the
22 quantity meeting the \$60,000 threshold.

23

1 **Q. IS IT APPROPRIATE TO USE THE \$60,000 ESTIMATED TOTAL**
2 **BUILDING TELECOMMUNICATIONS SPENDING AMOUNT AS**
3 **A POTENTIAL REVENUE STREAM CLECS COULD EXPECT TO**
4 **RECEIVE TO OFFSET THEIR COST OF LOOP**
5 **CONSTRUCTION?**

6 **A.** No. Consistent with the capacity-specific nature of the analysis, the only
7 revenues that should be considered are those specific to the building of
8 individual DS3s or dark fiber loops. This is consistent with the FCC's
9 determination as mentioned above that "the potential revenue stream
10 associated" with lower-capacity facilities "is many times smaller than
11 that" of a higher-capacity facility. *TRO* ¶ 320 n.945. Notably, the view
12 here must be of a carrier that has the opportunity to obtain access to UNEs
13 (otherwise an impairment review is unnecessary). Thus, since a
14 requesting carrier may only obtain up to 2 DS3s at UNE rates per
15 customer location, the question is whether that carrier – not a carrier
16 seeking to serve a larger demand – could afford to self-deploy its own
17 facilities to serve at that level. Accordingly, any reference to a "total
18 building revenue" is inappropriate. That figure certainly would contain
19 revenues other than those for the specific one or two DS3s that a
20 requesting carrier could obtain as a UNE, and can be expected to include
21 potential OC(n) circuits, long distance service, and data services, and, as a
22 result, improperly skews such analysis. If the total revenues for such
23 services were to be included in an potential deployment analysis, without

1 access to specific revenues available from specific uncommitted customers
2 in a location, the Commission only could anticipate that they would
3 generate average revenues for services provided over such facilities.
4 BellSouth does not offer proof of either. Moreover, if total revenues from
5 the use of a loop are to be considered, then the analysis must consider all
6 of the costs of providing all services over such facilities. BellSouth also
7 fails to produce this evidence. Moreover, this revenue figure does not
8 consider that enterprise customers in commercial buildings are generally
9 tied up in long-term contracts that make them economically unavailable
10 for a competitive provider.

11 Since loops are used as an input to other services and represent
12 only a small portion of the facilities needed to provide entire high capacity
13 services to enterprise customers, it would be both reasonable and
14 consistent to measure the costs of provisioning such facilities against the
15 revenues that a CLEC could earn by providing DS3s or dark fiber as a
16 wholesale offering. It is also consistent with CLEC "build or buy"
17 analyses for an individual building. For example, a CLEC's decision to
18 replace an existing special access line into a building with the CLEC's
19 own DS3 loop is driven solely by whether the cost to provision its own
20 loop is less than the cost of purchasing the special access line.

21

1 **Q. DOES DR. BANERJEE'S ANALYSIS USE ANY BUILDING**
2 **SPECIFIC COSTS FOR HIS POTENTIAL DEPLOYMENT**
3 **ANALYSIS?**

4 **A.** No. Dr. Banerjee's analysis uses two primary cost sources for his
5 analysis: hypothetical network cost information provided by BellSouth
6 witness Wayne Gray, and hypothetical expense information based upon a
7 proprietary BellSouth marketing model called the BellSouth Analysis of
8 Competitive Entry ("BACE").

9

10 **Q. IS THE COST INFORMATION PROVIDED BY BELL SOUTH**
11 **WITNESS GRAY MEANINGFUL IN THE CONTEXT OF THE**
12 **FCC'S POTENTIAL DEPLOYMENT REQUIREMENTS?**

13 **A.** No. Mr. Gray provided cost information that was used in developing
14 TELRIC rates. It is important to remember that, unlike typical costing
15 proceedings used to establish UNE rates, the potential deployment
16 analysis requires an evaluation of costs specific to CLECs, who do not
17 have BellSouth's scale, access to buildings, and access to rights-of-way.

18

19 **Q. WHAT ARE THE KEY ELEMENTS OF THE NETWORK COST**
20 **INFORMATION AS PRESENTED BY BELL SOUTH WITNESS**
21 **GRAY?**

1 A. Mr. Gray provides hypothetical network cost information for the optical
2 electronics used to derive a DS3 loop, and a hypothetical per-foot cost
3 estimate of fiber extension.
4

5 **Q. PLEASE EXPLAIN WHY YOU DO NOT BELIEVE IT IS**
6 **REASONABLE TO DETERMINE POTENTIAL DEPLOYMENT**
7 **BASED UPON A HYPOTHETICAL COST FACTOR BASED UPON**
8 **DISTANCE BETWEEN CLEC FACILITIES AND SPECIFIC**
9 **BUILDINGS.**

10 A. The use of a hypothetical per-foot cost factor as proposed by BellSouth is
11 flawed because does not take into consideration the location-specific
12 obstacles that might be located between the CLEC's facilities and the
13 building, especially in large city areas. Numerous obstacles and delays
14 almost always occur for projects that involve digging up city streets, and
15 the costs of such endeavors often accumulate to levels much higher than
16 originally expected. Probably the most famous recent example of this is
17 the "Big Dig", a highway renovation project that was recently completed
18 in Boston. That project, which replaced only 7.5 miles of highway, ended
19 up taking 15 years and costing in excess of \$14 billion, \$10 billion more
20 than originally expected. While this is obviously an extreme example, it
21 demonstrates that construction and installation of facilities over even short
22 distances in city areas can present much greater economic barriers than
23 will constructing facilities over longer distances in rural areas.

1

2 **Q. FROM A PRACTICAL PERSPECTIVE, DOES THE COST**
3 **INFORMATION THAT MR. GRAY PROVIDES MAKE SENSE IN**
4 **THE CONTEXT OF POTENTIAL DEPLOYMENT?**

5 **A. No. Mr. Gray's analysis assumes a total installed investment of *****
6 **BEGIN CONFIDENTIAL *** *** END CONFIDENTIAL**
7 *** per foot for a 100 strand fiber, including conduit and pole cost factors.
8 This means that, for a 1,000 foot build, BellSouth is assuming less than
9 *** **BEGIN CONFIDENTIAL *** *** END**
10 **CONFIDENTIAL ***** of construction costs, which reflects practically no
11 construction at all, as construction projects of this type can often run into
12 the hundreds of thousands of dollars depending upon the circumstances.

13

14 **Q. PLEASE COMMENT ON THE NET PRESENT VALUE ANALYSIS**
15 **PERFORMED BY DR. BANERJEE.**

16 **A. Although Dr. Banerjee appropriately uses a net present value analysis to**
17 evaluate the economic viability, the assumptions he uses in the analysis
18 are not reflective of the requirements of the FCC's potential deployment
19 analysis. First, as mentioned above, all of the inputs, both revenue and
20 cost, are hypothetical. Outside of the estimated distance between a CLEC
21 and the building, there is not one building-specific analysis for any of the
22 nine criteria outlined by the FCC. Second, Dr. Banerjee chooses two

1 unrealistic assumptions for the net present value analysis, both of which
2 increase the resulting net present value for each building.

3

4 **Q. PLEASE DESCRIBE THE FIRST UNREALISTIC ASSUMPTION**
5 **DR. BANERJEE USES IN HIS ANALYSIS.**

6 A. Dr. Banerjee choose a 10 year project life for his analysis, meaning that he
7 is assuming that the CLEC will have 10 years of revenue from customers
8 in the building to recover the up front capital costs and ongoing expenses
9 related to the loop. Obviously, the longer the project life, the more
10 revenue there is available to offset the costs.

11

12 **Q. BASED UPON YOUR EXPERIENCE, IS 10 YEARS AN**
13 **APPROPRIATE PERIOD TO ASSUME A CLEC WILL BE ABLE**
14 **TO RETAIN A CUSTOMER?**

15 A. No. Typically, customers are unwilling to commit to contracts greater
16 than 5 years, especially as prices of telecommunications services tend to
17 decline over time due to competition and technological innovation. In my
18 experience, it would be unlikely for a CLEC to allocate capital to a project
19 that did not produce a positive net present value until the 9th or 10th year.

20

21 **Q. WHAT IS THE SECOND UNREALISTING ASSUMPTION USED**
22 **IN DR. BANERJEE'S NPV ANALYSIS?**

1 A Dr. Banerjee uses a discount rate of only 10.8%. The discount rate is
2 supposed to reflect the risk-adjusted cost-of-capital of the company
3 making the investment, and is used to reduce the weighting of cash flows
4 farther out into the future for companies with higher risk. The practical
5 effect of a lower discount rate is that cash flows in later years will have
6 more bearing than they would if a higher discount rate were used, and thus
7 provides for a higher net present value.

8

9 Q. **WHY DO BELIEVE THAT A DISCOUNT RATE OF 10.8% IS**
10 **UNREASONABLE FOR A CLEC?**

11 A. This discount rate is approximately the same as that ordered of BellSouth
12 in the most recent Florida UNE proceeding, and actually significantly
13 lower than that proposed by BellSouth for itself in those proceedings. As
14 BellSouth is an incumbent local exchange carrier, it's investments are
15 perceived to be less risky relative to CLECs, especially after the numerous
16 CLEC bankruptcies over the past several year.

17

18 Q. **HOW DID BELL SOUTH REPRESENT ITS OWN COST OF**
19 **CAPITAL IN THE PREVIOUS UNE PROCEEDING?**

20 A. In Florida Docket No. 990649-TP, BellSouth witness Billingsley testified
21 that the 11.25% cost of capital is BellSouth had proposed is reasonable
22 and conservative given his estimate that BellSouth's actual cost of capital
23 ranges from 14.61% to 14.91%.

1

2 **Q. ARE YOU AWARE OF ANY OTHER ANALYSES THAT**
3 **PRESENT A MORE REALISTIC DEPICTION OF THE COSTS**
4 **AND NECESSARY REVENUES FOR A CLEC TO EXTEND ITS**
5 **NETWORK INTO A NEW BUILDING?**

6 A. Yes. On November 25, 2002, AT&T filed a study with the FCC, in
7 conjunction with the FCC's Triennial Review proceedings, which
8 analyzes the costs and required revenues necessary to justify extending a
9 typical CLEC's network to a new building. The study is included as
10 Exhibit GJB-1 to my testimony. I have reviewed the AT&T study and,
11 based on my experience, I find it presents a more thorough and realistic
12 analysis of the costs that would be encountered and the revenues that
13 would be considered by a CLEC in determining whether to extend a
14 typical CLEC network into a new building than the analysis used by
15 BellSouth in this case.

16

17 **Q. WHAT WERE THE CONCLUSIONS OF THE AT&T STUDY AS**
18 **IT PERTAINS TO UNBUNDLED LOOPS?**

19 A. The study concluded that CLECs generally need to be able to provision at
20 least 3 DS3s into a given building before the cost of constructing the loops
21 can be recovered. This is consistent with the FCC's conclusion that no
22 impairment exists for OC(3) and above loops.

23

1 **Q. HOW DO YOU PROPOSE THAT THE AT&T STUDY BE USED**
2 **BY THE COMMISSION IN EVALUATING BELLSOUTH'S**
3 **POTENTIAL ANALYSIS?**

4 **A.** The AT&T study supports the position that it is generally not economic
5 for CLECs to build for the provision of a single DS3 or dark fiber loop to
6 a building, and that any building for which BellSouth claims potential
7 deployment must be treated as a unique exception, which must be
8 supported by a full, building specific analysis.

9
10 **Q. DID BELLSOUTH PROVIDE EVIDENCE OF ALTERNATIVE**
11 **LOOP DEPLOYMENT FOR THE 38 BUILDINGS ON ITS LIST?**

12 **A.** Dr. Banerjee did not indicate which of the buildings on the list had any
13 loop deployment, and if so, how much.

14
15 **Q. SHOULD ANY OF THE BUILDINGS LISTED BY BELLSOUTH**
16 **QUALIFY FOR POTENTIAL DEPLOYMENT BASED UPON**
17 **BELLSOUTH'S SHOWING IN THIS CASE?**

18 **A.** No. BellSouth's analysis does not meet any of the FCC's criteria, and
19 therefore this Commission should find that BellSouth has not satisfied the
20 potential deployment analysis for any of the buildings listed in the
21 attachments to the Banerjee testimony.

22

1 **Q. HOW SHOULD BELL SOUTH HAVE DONE ITS POTENTIAL**
2 **DEPLOYMENT ANALYSIS FOR HIGH CAPACITY LOOPS?**

3 A. BellSouth should have performed an individual discounted cash flow
4 analysis using specific cost and potential revenue information for each
5 building instead of hypothetical values. The analysis would provide
6 evidence of alternate loop deployment for each building, and would
7 specifically address each of the FCC's points. The discounted cash flow
8 analysis would use project lives and depreciation rates that a CLEC
9 actually would use for itself if it were really analyzing whether to extend
10 its network out to a new building.

11

12 **B. DEDICATED TRANSPORT**

13 **Q. DID BELL SOUTH PROPOSE THAT ANY TRANSPORT ROUTES**
14 **MEET THE POTENTIAL DEPLOYMENT TEST IN THIS**
15 **MATTER?**

16 A. No.

17

18 **VI. TRANSITIONAL ISSUES**

19 **Q. MS. PADGETT STATES THAT CLECS SHOULD ONLY HAVE A**
20 **NINETY DAY TRANSITION PERIOD. IS THIS REASONABLE?**

21 A. No. If anything, Ms. Padgett's proposal is the unreasonable one. First, if
22 CLECs were forced to disconnect their existing UNEs on a broad scale
23 and convert them to some other type of service, it would take BellSouth

1 much longer than 90 days just to develop a cutover plan for transitioning
2 the circuits to another CLEC's network. A "special project" such as this
3 would obviously have to be coordinated with the day-to-day operational
4 activities of BellSouth as well as the numerous other carriers involved.
5 Second, the Commission must ensure that CLECs can transition their
6 services to another CLEC before such a transition could occur, which as I
7 stated in my direct testimony, is not a simple conversion process.
8 Sufficient time must be allowed for this conversion to occur in an orderly
9 manner, without threatening customer disruption.

10

11 **Q. WHY WOULDN'T CLECS CONVERT THEIR UNES TO**
12 **BELLSOUTH'S SPECIAL ACCESS SERVICES?**

13 A. While they certainly will have that option, the underlying premise of the
14 triggers is that there will be evidence that the CLECs can either building
15 their own loops or utilize the wholesale offerings of another carrier. It
16 would defeat the purpose of the triggers and the impairment analysis if
17 CLECs were not given a reasonable opportunity to avail themselves of the
18 options implied by the triggers.

19

20 **Q. WHAT ISSUES ARE INVOLVED IN ESTABLISHING AN**
21 **APPROPRIATE TRANSITION PERIOD?**

22 A. A transition period is required for two reasons. First, CLECs made
23 specific business decisions to serve or not serve customers in reliance on

1 the availability of UNE loops or UNE transport to the customer location or
2 on the relevant transport route. CLECs must be able to continue to offer
3 service to these customers after a finding of non-impairment. This
4 consideration is essential because services to enterprise customers are
5 contract-based and generally do not allow the provider to terminate or
6 modify the contract based upon sudden cost increases. Without a
7 transition period, CLECs and their customers would face significant
8 disruptions to their services if access to unbundled loops were
9 disconnected or migrated to other services. A transition is needed,
10 therefore, to prevent rate shock to customers receiving service using UNE
11 arrangements.

12
13 Second, a CLEC cannot modify its network overnight. A litany of
14 business arrangements will have to be negotiated, modified and
15 implemented if a state commission determines that one of the triggers has
16 been satisfied. For example, if a state commission determines that two or
17 more wholesale providers make their facilities widely available to other
18 CLECs, CLECs needing loops or transport (as the case may be) will need
19 time to consider the alternative sources of supply that are available to them
20 and to implement the solution that best fits each CLEC's needs. One
21 cannot assume that a CLEC will desire to transition to an ILEC-provided
22 non-UNE service. Indeed, if the wholesale trigger is satisfied, it is
23 because other alternatives are equally viable and presumably equally

1 attractive to the CLEC. A transition period must build in sufficient time to
2 enable the CLEC to make use of the alternatives that underlie the finding
3 of non-impairment.

4

5 **Q. ARE THERE ADDITIONAL TRANSITION ISSUES THE**
6 **COMMISSION SHOULD CONSIDER?**

7 A. Yes. The Commission should ensure that ILECs maintain an adequate
8 process for ordering combinations of loops and transport, in situations
9 where one or both network elements of the combination have been
10 delisted. In the *TRO*, over ILEC objections, the FCC specifically stated
11 that competing carriers are permitted to continue to have access to
12 combinations of loops and transport regardless of whether one of the items
13 has been delisted. *See TRO* ¶ 584. Similarly, the Commission should
14 ensure that ILECs have adequate billing processes and procedures in place
15 for CLECs to purchase delisted network elements, whether individually or
16 in combination.

17

18 **Q. HOW SHOULD TRANSITION ISSUES BE ADDRESSED?**

19 A. Establishing an appropriate transition period is a complex task. Ideally,
20 these issues should be addressed in a phase of this proceeding that
21 immediately follows the finding of non-impairment. If the Commission
22 follows such a procedure, ILECs should be prohibited from billing special
23 access rates to CLECs while the Commission receives evidence on the

1 elements necessary to protect customers from rate shock and to enable
2 CLECs to build replacement facilities and/or to migrate to the network
3 facilities of non-ILEC providers. In the event an interim transition is
4 desired, I recommend the minimum components described below.

5
6 **Q. WHAT IS YOUR RECOMMENDATION REGARDING THE**
7 **MINIMUM COMPONENTS OF A TRANSITION PROCESS?**

8 A. I recommend that the Commission develop a multi-tiered transition
9 process such as the one applicable to mass-market switching. First, there
10 should be a transition period during which CLECs may order new UNEs
11 for locations and routes where the commission found a trigger is met.
12 This period should be a minimum of nine months in order to enable a
13 CLEC to continue to offer competitive service to new customers while it
14 explores alternatives available to it. Second, CLECs should have a
15 transition period for existing customers similar to that applied to line
16 sharing and mass-market switching. The three year transition process
17 established for customers served by line sharing arrangements may
18 provide a useful model, with one-third of the customers to be transitioned
19 within 13 months, and another one-third transitioned within 20 months.
20 All loop and transport UNEs made available during these transition
21 periods should continue to be made available at TELRIC rates until
22 migrated.

23

1 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

2 **A. Yes, it does.**



Joan Marsh
Director
Federal Government Affairs

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202 457 3120
FAX 202 457 3110

November 25, 2002

Ms. Marlene Dortch
Secretary
Federal Communications Commission
445 12th Street, SW, Room TWB-204
Washington, DC 20554

Re: Notice of Oral Ex Parte Communication, In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, CC Docket Nos. 01-338, 96-98 and 98-147

Dear Ms. Dortch:

In recent *ex partes*, AT&T has stated that the absolute minimum "crossover" point at which it becomes economically rational for a requesting competitive carrier to consider constructing its own interoffice transport facilities is reached when the carrier can aggregate approximately 18 DS3s of *total* traffic in a Local Serving Office (LSO), including all local, data, exchange access and interexchange traffic routed through the office. At Staff's request, AT&T has developed a detailed explanation of the methodology used to develop that estimate which can be found in Attachment A to this letter.

One of the critical points to note is that in developing the "crossover" point, AT&T did *not* attempt to assess the ILECs' TELRIC costs of providing transport to themselves and their affiliates (and thus the actual cost disadvantage that requesting carriers face in using such facilities to offer services that compete with the ILECs' services). Rather, AT&T compared the costs of provisioning its own transport to its average costs for purchasing ILEC *special access services*, which are admittedly *not* offered at cost-based rates. Indeed, they are priced at exorbitant levels. Thus, this analysis is highly favorable to the ILECs. Given that TELRIC costs are actually between half and two-thirds of the prevailing special access rates, the crossover point for facilities construction necessary for a competitive carrier not paying special access rates to achieve cost parity with the ILECs is between 28 and 36 DS3s of total traffic. See Attachment A.

As is also obvious from Attachment A, transport construction represents a high fixed cost. Moreover, nearly two-thirds of interoffice transport costs are fixed.¹ Thus, a carrier cannot be expected to begin construction of its own transport facilities until it is reasonably certain that it will have the necessary scale to recover its construction costs.² Otherwise, such construction would simply be wasteful.

In this regard, it is essential that CLECs be able to achieve a cost structure comparable to the ILEC's even where the incumbent's existing prices are well above costs. Where a CLEC has significantly higher costs than the ILEC, the CLEC knows that the ILEC could simply drop its prices below the CLEC's costs, but still above the ILEC's costs, and remain profitable. But by setting prices below the CLEC's costs, the ILEC would make it impossible for the entrant to remain economically viable. The prospect of such a pricing strategy is particularly high where, as is the case for services provided to businesses, the ILEC can price discriminate. This allows the ILEC to lower prices selectively, *i.e.*, only to those customers that could potentially be served by the CLEC, and thus to keep prices high for all other customers. Thus, because transport constitutes a sizeable percentage of the overall cost of telecommunications services, facilities-based entry is generally viable only where a CLEC can self-deploy transport at a cost that is not well in excess of the ILEC's costs.³

Finally, a carrier's analysis of whether to construct a fiber backbone ring (and thus provide its own transport) is very different from its analysis as to whether to build a Building Ring or a Customer Lateral off an existing Building Ring to provide the equivalent of a loop for large customer buildings. Accordingly, the amount of committed traffic necessary to support the construction of loops for large business customers – which AT&T has indicated is about 3 DS3s of traffic – is substantially less than the amount needed to support the construction of a backbone ring. The assumption here is that the existing transport ring is justified for other purposes and that the loop is addressed by incrementally attaching a small ring to serve a specific building and, where necessary, a short lateral extension. In support of AT&T's claim that 3 DS3s of traffic is required to support an economically rational lateral fiber build-out, and to ensure that the record is complete, AT&T is also submitting with this *ex parte* a detailed discussion regarding AT&T's estimation of loop construction costs, which is appended as Attachment B.

¹ See *ex parte* letter from C. Frederick Beckner to Marlene Dortch dated November 14, 2002, attaching white paper prepared by Professor Robert D. Willig entitled "Determining 'Impairment' Using the *Horizontal Merger Guidelines* Entry Analysis," p. 13.

² *Id.* at 5.

³ *Id.* at 7-8.

Consistent with Commission rules, I am filing one electronic copy of this notice and request that you place it in the record of the above-referenced proceedings.

Sincerely,

A handwritten signature in black ink, appearing to be 'JM' followed by a horizontal line.

Joan Marsh

cc: Michelle Carey
Thomas Navin
Robert Tanner
Jeremy Miller
Dan Shiman
Julie Veach
Don Stockdale

Attachment A

DETAILED DESCRIPTION OF CLECS' COLLOCATION AND BACKHAUL INFRASTRUCTURE COSTS

Introduction:

A CLEC seeking to enter the market using its own facilities must incur collocation and transport costs to "backhaul" traffic from an ILEC serving office where its customers' loops terminate to its own switch. In a recent filing, AT&T explained that the costs associated with collocation and backhaul average about \$33,000 per month and that at least 18 DS3s in traffic volume is required to make such investment prudent. This document provides detailed information on how these figures were developed.

In simple terms, collocation costs arise from three key sources: (1) the backhaul facility, (2) the collocation space itself, and (3) the equipment placed within the collocation. The derivation of costs for each component is described below.

Backhaul Facilities:

Backhaul facilities comprise the largest component of a CLEC's infrastructure costs. These include the costs of deploying an interoffice fiber facility in a ring architecture. The absolute cost of such a ring is predominantly a function of the length of the fiber cable, the nature of the structure employed to support the cable (aerial/buried/underground) and the density zone where the fiber facility is deployed. The number of strands deployed impacts the carrier's costs to only a minor degree.¹

The following table lists the key assumptions underlying AT&T's calculation of structure costs and identifies the HAI material discussing the derivation of the input cost:

Item	Aerial	Buried	U/G	ref (HAI 5.2)
Placement/ft		\$ 1.77	\$ 16.40	p.102
Added Sheathing/ft		\$ 0.20		p.102
Conduit			\$ 0.60	p.102
Pull Box (per ft, 1 per 2000 ft)			\$ 0.25	p.104
Poles (per ft, 1 per 150ft)	\$ 2.78			pp.104-105
U/G excavation/restoration			\$ 23.74	p.140
Buried excavation/restoration		\$ 6.71		p.143
Total construction	\$ 2.78	\$ 8.68	\$ 40.99	

¹ In fact, the variable cost per fiber strand is \$0.032/foot (See HAI 5.2 inputs, page 100) and the average cost of the cable (installation and engineering) is about \$1.00 per foot. In sharp contrast, the cost of supporting structures for a cable can be as high as \$45/foot (for buried cable) or \$75/foot (for underground cable). For the purposes of analysis, although large quantities of dark strands would be deployed with the initial build, no cost of this dark capacity is attributed to the interoffice transport.

The buried and underground (U/G) placement costs in the above table are derived from the HAI model input data. They represent a weighted average of the four highest density zones in the model. These zones were selected because they are the zones covering more metropolitan areas, where CLEC facility construction is most likely to occur first. This is also consistent with the RBOCs' data on existing placements of fiber-based collocations.² The following weightings were applied by density zone:

Weighting Factor	
Density Zone	Weighting
0-5	0.00%
5-100	0.00%
100-200	0.00%
200-650	0.00%
650-850	0.00%
850-2250	65.00%
2250-5000	20.00%
5000-1000	10.00%
>10000	5.00%

The weighted unit costs were developed by multiplying the density zone weighting and the appropriate structure placement unit cost (note that the aerial placement was not a function of density zone). The placement unit costs employed and the resulting weighted averages are shown below:

Buried Excavation, Installation, and Restoration (p.143)	
Density Zone	Cost/ft
0-5	\$ 1.77
5-100	\$ 1.77
100-200	\$ 1.77
200-650	\$ 1.93
650-850	\$ 2.17
850-2250	\$ 3.54
2250-5000	\$ 4.27
5000-1000	\$ 13.00
>10000	\$ 45.00

Minimum \$ 1.77
Maximum \$ 45.00
Employed \$ 6.71

U/G Excavation, Installation, and Restoration (p.140)	
Density Zone	Cost/ft
0-5	\$ 10.29
5-100	\$ 10.29
100-200	\$ 10.29
200-650	\$ 11.35
650-850	\$ 11.88
850-2250	\$ 16.40
2250-5000	\$ 21.60
5000-1000	\$ 50.10
>10000	\$ 75.00

Minimum \$ 10.29
Maximum \$ 75.00
Employed \$ 48.90

² The RBOC UNE Fact Report (page III-2, Table I) shows that 13% of the RBOCs' wire centers have fiber collocators present. The cut off for the top 13% of RBOC offices is in the range of 36,000 lines. Given that loops are generally less than 3 miles in length, a central office service area will be about 27 square miles (or less in metropolitan areas). Thus the RBOCs' own data show that CLEC facility builds are occurring in areas where line density is no lower than 36,000/27, or no less than about 1,400 lines per square mile. Thus, using the entire 850-2250 line density zone is conservative.

Because structure proportions vary by density zone, it was necessary to establish the weighted average structure presence in order to develop a single weighted average unit cost. The structure proportion by density zone was obtained from HAI 5.2 inputs and are shown below:

Fiber Feeder Structure Proportions (HAI 5.2 p/59)			
density zone	aerial	Buried	U/G
0-5	35%	60%	5%
5-100	35%	60%	5%
100-200	35%	60%	5%
200-650	30%	60%	10%
650-850	30%	30%	40%
850-2250	20%	20%	60%
2250-5000	15%	10%	75%
5000-1000	10%	5%	85%
>10000	5%	5%	90%

These proportions were then multiplied by the above density zone weighting and yielded the following weighted presence of structures for the purposes of the study:

Weighted Structure Distribution			
Density Zone	Aerial	Buried	U/G
0-5	0.0%	0.0%	0.0%
5-100	0.0%	0.0%	0.0%
100-200	0.0%	0.0%	0.0%
200-650	0.0%	0.0%	0.0%
650-850	0.0%	0.0%	0.0%
850-2250	13.0%	13.0%	39.0%
2250-5000	3.0%	2.0%	15.0%
5000-1000	1.0%	0.5%	8.5%
>10000	0.3%	0.3%	4.5%

Weighted	17.3%	15.8%	67.0%
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The cost of the fiber cable placed within the structure was also derived from HAI inputs. Fiber feeder cost were used as a proxy (see HAI 5.2 inputs, page 100):

	Fixed (per cable)/foot		Variable per strand
	Installation	Engineering	
Buried	\$ 0.970	\$ 0.040	\$ 0.030
Aerial	\$ 0.880	\$ 0.040	\$ 0.037
Underground	\$ 1.020	\$ 0.040	\$ 0.032

Finally, it was necessary to establish the lives for the various types of facility placement, the salvage and the annual maintenance cost in order to quantify the full cost of the conductor. These inputs are listed below, together with the source:

Item	Aerial	Buried	U/G	ref (HAI 5.2)
Life	26.14	26.45	25.91	p.129
Salvage	-17.5%	-8.6%	-14.6%	p.129
Maintenance	0.7%	0.8%	0.6%	FCC Synthesis Model Input

In order to generate a single set of factors covering the three alternative structures, the individual results were combined as a weighted average. This was accomplished by weighting each unit cost and the salvage, life and maintenance factor by the proportion of structures in the density zones under consideration. This was done by using the weighted average structure distribution developed above.

The following elements were the resulting weighted element inputs:

Weighted Life	26.03
Weighted Salvage	-14.1%
Weighted Maintenance	0.67%
Total Installed Cost	\$ 30.34 per foot
	\$ 0.033 per strand per foot

In order to quantify the investment, the total length of cable and the total number of strands needed to be specified. For the analysis, an average span cost assignment equivalent to 8.94 miles was employed, based upon AT&T's experience.³ Thus, the total assigned investment is \$1.435 million per span.⁴ The associated monthly maintenance expense is 0.67% of the investment amount assigned to the node divided by 12, or \$798 per month per node.⁵

The monthly capital recovery was amortized over the life of the investment after the investment was grossed-up for the net salvage. A 14.24% cost of money was employed, which is very conservative, as it does not reflect the higher risk associated with the CLEC

³ By the end of 2001 AT&T had deployed 17,026 route miles of local fiber in which 1,905 spans were active (unique point pairs). Accordingly, the average route miles per active span in AT&T's network is 8.94 miles. While this does not mean that each physical segment is that length, it provides a reasonable means to allocate, among active uses, the cost of a shared facility.

⁴ The calculation is $(8.94 * (\$30.34 + 2 * .033) * 5280)$ for a total of \$1.435M.

⁵ The calculation is $(\$1.435M * 0.67\%) / 12$.

operations (compared to the 10% cost of money assumed for the incumbents).⁶ These factors yielded a monthly investment recovery cost of \$19,937 for the facility.⁷ The total monthly costs for the facility, including maintenance, is \$20,806 per month. Another 5% was added to account for non-income tax coverage requirements for a total of \$21,771 per month.

Collocation Space:

Collocation costs are simply the costs associated with renting and securing conditioned Central Office space within an ILEC office. The collocation space is the area where the CLEC places its transmission equipment and terminates its interoffice facility for cross-connection to other interoffice or loop facilities. The collocation costs are comprised of two main components: (1) the cost of initially preparing and securing the space, and (2) the on-going cost of renting the space (which not only includes the physical space but also heating, ventilation, air conditioning and power).

The space preparation cost is treated as an investment and recovered over the life of the equipment placed within the collocation. For the purposes of this analysis, 10.24 years was employed, which is the average useful life of digital circuit equipment (see HAI 5.2 inputs, page 129). The same cost of money and treatment of taxes employed for the facility analysis above was utilized here as well. Neither gross salvage nor cost of removal were assumed.

Because HAI inputs are oriented to ILEC operations, no collocation costs are reflected as cost inputs. Accordingly, internal estimates of collocation preparation costs were employed. Internal estimates indicated that the preparation costs are in the range of \$200,000 to \$250,000. This, in turn, yields a \$3,488 monthly cost for the preparation alone.

The monthly physical collocation rental costs were developed from ILEC billing to AT&T. When analyzed on the LEC-LATA level, the average monthly expense was \$4,083 although the true mean could be expected to lie anywhere in the range of \$3,579 to \$4,586 (at a 95% level of confidence). The average figure was employed for the analysis.⁸ Accordingly, the monthly costs attributable to collocation in total were \$7,950 per month after taking into account taxes other than income taxes.

⁶ For simplicity in the study, a pre-tax cost-of-money was employed. The figure is entirely consistent with the ILEC cost of money of 10.01% employed in the HAI model. The 14.24% cost of money is derived by the following equation: $\%debt * \text{cost of debt} + \%equity * \text{cost of equity} / (1 - \text{effective income tax rate})$. In this instance the % debt was 45%, the cost of debt was 7.7%, the cost of equity was 11.9% and the effective income tax rate was 39.25%.

⁷ The calculation was the EXCEL PMT function: $@PMT((14.24\%/12), (26.03*12), ((\$1.435M) * (1 - (14.1\%)))$. The multiplication by 1.1418 grosses the initial investment up for gross salvage less cost of removal which, in this case, is negative.

⁸ As with other expense, this figure was increased by 5% to account for taxes other than income taxes.

Transmission Equipment:

When operating at the interoffice transport level, there is relatively little equipment placed within the collocation. The necessary equipment includes: optical path panels (to terminate and cross-connect the fiber facility), optical multiplexers, and power distribution (e.g., power filtering and fuses) equipment.

The optical path panel costs are described in HAI 5.2 inputs (p.97). The panels cost \$1,000 each, and the cost of cross-connecting to the equipment is \$60/strand. In this instance, 2 cross-connections are required per panel (one in and one out) and 2 panels are employed (one for each strand to assure no single point of failure). Accordingly, the capital investment for the panels is \$2,240.

The HAI input lists the investment associated with an optical multiplexer (see page 96). The base unit cost is \$40,000 (12 DS3 capacity) and the fully equipped unit cost is \$50,000 (48 DS3s). Thus, the investment is \$40,000, \$43,333.33, \$46,666.67 or \$50,000 depending upon whether 12, 24, 36, or 48 DS3s are in service. This is the only aspect of the investment that is demand sensitive (i.e., if fewer than 48 DS3s are assumed) but this amounts to little more than \$3 per DS3. Two multiplexers are assumed to provide redundancy and, as set forth in HAI 5.2 inputs, it is assumed that there is \$1,760 invested to engineer, furnish and install each multiplexer and associated optical panel (see page 97). The total investment in the optical multiplexers (24 DS3s assumed) is \$90,187.⁹

The installed cost of the last remaining equipment item – the battery distribution fuse bay (BFDB) – is estimated at \$62,500.¹⁰

The total installed equipment cost is therefore \$2,240 for the distribution panels, \$90,187 for the multiplexers and \$62,500 for the BFDB, yielding a total of \$154,927. Amortizing this amount over the average useful life of circuit equipment, applying a 1.69% net salvage (HAI 5.2 p 130) and the same cost of money as above, yields an investment recovery cost of \$2,443 per month. Maintenance costs are derived by applying a 2% annual maintenance factor (see FCC Synthesis Model for circuit equipment) to the \$154,927 gross investment (with the result divided by 12), for a maintenance cost of \$258 per month. Combining these two figures and providing for 5% non-income tax related costs yields a total cost of \$2,836 per month.

Rationale for the 18 DS3 Minimum:

Adding all of the above figures yields a monthly average cost of \$32,557. Given that the monthly costs of facility-based collocation are effectively insensitive to volume, the average unit cost is simply the \$32,557 monthly figure divided by the number of DS3s in service.

⁹ $2 \times (43,333.33 + 1760)$

¹⁰ This is an internal estimate, because there is no equivalent identified in the HAI inputs.

Assuming that unbundled transport is not available as an unbundled network element, and in the absence of market-based competition for connectivity between the necessary points, a CLEC's only practical alternative to building its own facilities is to use ILEC special access service. In today's market, given the continuing imposition of use and commingling restrictions, this special access would be likely be bought under a term plan of either three or five years. Assuming that the special access interoffice mileage would be equivalent to the average span, then a comparison of alternatives is possible. Note, however, that this is *not* a comparison between actual ILEC costs for existing transport facilities and anticipated CLEC costs for new construction. Rather, it is a comparison between anticipated CLEC construction costs and ILEC special access rates, which are admittedly well above the ILEC's costs.

AT&T's experience is that a DS3 interoffice facility plus one channel termination¹¹ will cost approximately \$2,363 per month under a 36-month term agreement and \$1,780 per month under a 60-month term agreement. Thus, at least 14 DS3 would be required to break-even compared to a 36-month term special access rate and at least 18 DS3s would be required compared to a 60-month term special access rate. Given that the collocation was assumed to have a 10-year useful life, comparison to the 60-month term agreement was judged most relevant, making the 18 DS3 figure the appropriate comparison.

In fact, AT&T has demonstrated that special access is priced (exorbitantly) well above economic cost. Further, AT&T has demonstrated that a carrier cannot viably enter a local market on a facilities-basis if it incurs costs for a key input that are well above the cost that the ILEC itself incurs for that input. Given that the ILEC's economic costs of transport are in the range of half to two-thirds of prevailing special access rates, then 28 to 36 DS3s would be required to "prove-in" a transport facilities build if the competitive carrier were to achieve cost parity with the ILEC.¹²

¹¹ If a facility is not build, not only is the interoffice transport required but a connection from the final LSO to the switch location (i.e., a high capacity channel term or entrance facility) is also required.

¹² If the unit cost alternative were 50% to 67% lower, then the revised break-even point is simply the originally calculated break-even point divided by the preceding price ratio.

Attachment B

ESTIMATING THE COST OF LOOP CONSTRUCTION

Introduction:

Loop facilities are one of the most basic components of a telecommunications network and are used in the provision of all services, whether switched or dedicated. These facilities provide the physical connection between the customer location and the network of the serving carrier. Because much of the investment is dedicated to one or a very small number of customers, and because the facilities have very high initial costs to deploy, only the very largest customer locations (in terms of service demand) can be economically reached through an over-build. The focus of this paper is upon such "large" customer locations. As shown below, a CLEC must have the potential to serve a large number of buildings (about 20) within a consolidated geographic area, with each building generating at least 3 DS3s of demand before a build is economic. Even then, serving the location will involve significant investment – approximately \$6.7M for the building ring, plus approximately \$3M for the premises and node equipment. And all of this analysis assumes that the CLEC considering the build can reach the buildings in the area with rights of way and building access comparable to the ILEC.

Before discussing the costs of building it is first important to share a common understanding of the general architecture of the outside plant employed by a CLEC. Figure 1 below provides a general representation of this plant:

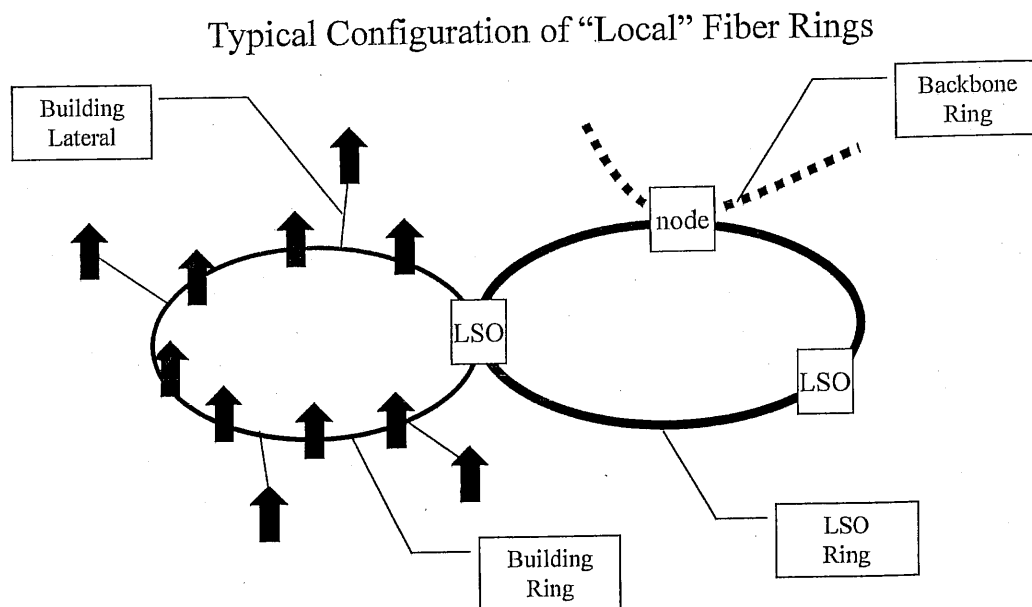


Figure 1.

A self-provided CLEC "loop" is actually composed of two to three interconnected facilities. The first is the LSO Ring. This ring connects the network locations (e.g., facility/switch nodes and collocations) within a metropolitan area. The cost of connecting these locations is discussed in a related paper quantifying the costs of transport and will not be repeated here.¹ The LSO Ring interfaces with two other ring types: backbone rings and building rings. Because the loop is constructed to reach the service provider's network, which effectively starts and ends at the backbone ring (for dedicated services) or the switch connecting to the backbone ring (for switched services), the costs of the backbone ring are not relevant to the discussion of loop costs. On the other hand, the building rings are a significant consideration in quantifying loop costs. A Building Ring extends the CLEC network from a very aggregated demand point (i.e., the facility-based collocation in an LSO) to (or near) customers' premises.

The final component of the loop infrastructure is the Customer Lateral. When a Building Ring is constructed, every effort is made to run the ring facility directly through critical buildings. In fact, Building Rings tend to be about 30 route miles long and tend to have 10 to 15 buildings on each.² Whether or not a building is placed on a ring is highly dependent upon factors such as the following: (1) whether the location was identified as a "high volume" location early enough in the planning to permit its inclusion, (2) whether access to the building could be secured from the landlord in a timeframe consistent with the overall project time line, and (3) whether building access costs were not judged prohibitive. If a building is not placed directly on the building ring as part of the initial build, it may still be possible to add a building at a later point. Such buildings are added by extending a short segment of fiber that is spliced to the ring and extends to the building. Because these segments are not shared with any other users other than the single building connected, and because the segment generally is not protected via diverse routing of redundant facilities, laterals tend to be very short.³

To recap: an LSO Ring is a highly aggregated facility that is shared among a wide variety of customer locations and services; a Building Ring is a facility whose use is shared among 10 to 15 buildings; a Customer Lateral is a facility useful only for the particular building connected.

In order to quantify the cost of these loops, a general understanding of the essential equipment components is important. The key components are shown in Figure 2:

¹ See Attachment A to this Submission, referred to herein as the Transport *ex parte*.

² These characteristics tend to vary by specific metropolitan area. However, the AT&T Outside Plant Engineering organization believes these parameters reasonably reflect the conditions across its local markets. Other carriers may have different experiences due to different market strategies and less robust local fiber facility deployment.

³ AT&T seeks to limit laterals to less than 500 feet in order to contain customer-dedicated investment and to reduce the risk of facility damage (i.e., the longer the facility the greater the probability that some form of mechanical harm may be experienced).

Typical Configuration of An On-Net Building "Loop"

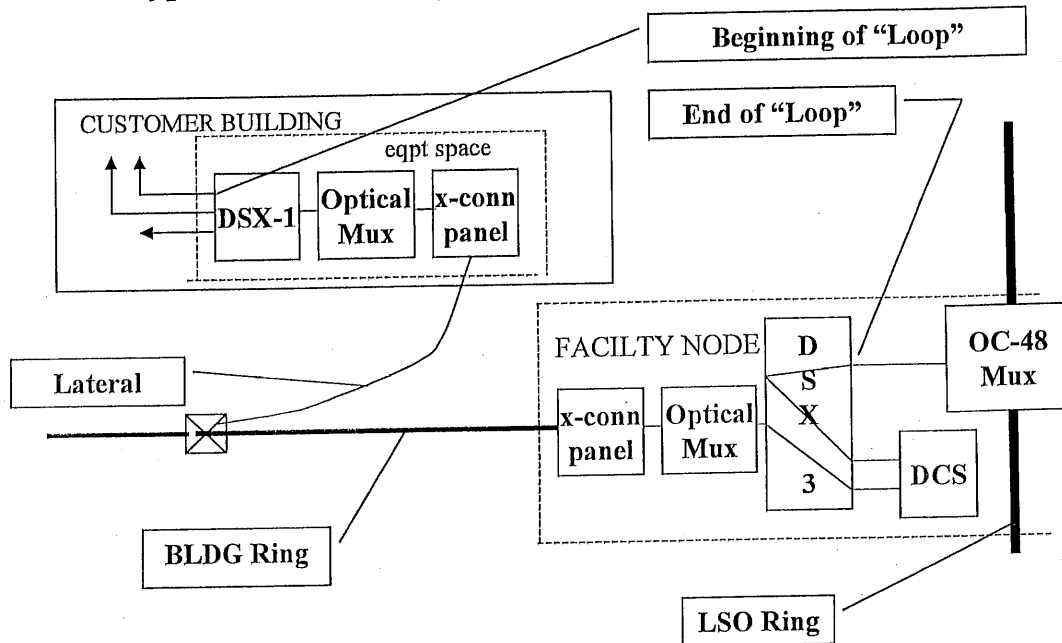


Figure 2

The functions of the individual components are relatively straightforward:

DSX-1 or DSX-3: Provides a cross-connection point between facilities operating at the DS1 level (DSX-1) or the DS3 level (DSX-3) without requiring that the facility be de-multiplexed to a lower bandwidth. The DSX frames allow relatively non-disruptive addition and removal of equipment, reasonable physical test access, and provide efficient means for cross-connecting circuits.

Optical Mux (and OC-48 Mux): Transmission equipment that aggregates (*i.e.*, multiplexes or "muxes") multiple lower bandwidth services onto a very high bandwidth facility. An Optical mux generally also supports signal conversions between optical and electrical based transmissions.

Digital Cross-Connection System (DCS): Provides for the grooming of facilities without the need to de-multiplex and re-multiplex the individual "channels" of the connecting facilities. For example, it permits the moving of DS1 #5 contained within DS3 #2 in facility segment A to DS1#17 within DS3 #3 on facility segment B. DCS allows improved utilization of very high capacity facilities.

X-conn Panel (or Fiber Distribution Panel): Provides a point of termination and cross-connection of a fiber facility to transmission equipment that manages the communications carrier within a fiber conductor.

Quantification of Cost of Self-provided Loops:

The cost of a self-provided loop can be conveniently analyzed based upon the following categories:

- Lateral facility
- Building Ring facility
- LSO Ring transport
- Building location costs
- Node costs (interfacing between a Building Ring and an LSO Ring)

Each of these categories is reasonably subdivided into subcategories of investment costs, maintenance costs, and taxes.

Customer Lateral Facility:

As discussed above, the lateral facility is a short fiber that is dedicated to an individual building connected to a Building Ring. Because CLEC-provided loop facilities are typically placed in dense metropolitan areas, such facilities are virtually always placed in an underground structure. Consistent with the LSO Ring analysis, the building connected will be in one of the four most dense cells as defined in the HAI 5.2 model. Accordingly, the unit cost for the fiber lateral is the same as that underlying the analysis of the LSO Ring costs and is \$40.99 per foot and \$0.033 per strand foot. A twelve-strand fiber is assumed although this assumption does not materially impact the overall cost of the fiber lateral. Accordingly, the gross investment is \$20,690⁴ and converts to an investment cost of \$342 per month.⁵ As with the LSO transport model, a 0.61% per year per gross investment dollar maintenance assumption is applied, and 5% of investment and maintenance costs were added to cover non-income taxes. This results in a maintenance expense of about \$11 and tax expense of \$17 per month associated with the lateral. The total cost is \$370 per month.⁶

⁴ The actual calculation is as follows: 500 feet* (\$40.99/foot+ 12 strands *(\$0.033/strand-foot)).

⁵ The calculation is the same as employed in the LSO transport cost analysis in the Transport *ex parte* and employs the EXCEL PMT function. The actual calculation is $PMT(\text{cost of money, recovery period, gross investment} \cdot (1 - \text{salvage}))$. The cost of money employed in this analysis is based upon the pre-tax cost of money employed in the LSO transport cost analysis (*i.e.*, 14.24%) increased by 20% to account for the greater risk associated with the loop plant investment (*i.e.*, the actual cost of money employed is 17.09% per year). The recovery period for the building-dedicated investment is 6 years. Net salvage is the same as that used for fiber facilities and is identical to that underlying the LSO transport analysis for underground fiber (*i.e.*, -14.58%).

⁶ If the lateral life is assumed to be the same as that of an underground fiber, the overall cost declines to \$91 per month, distributed \$76 for investment recovery, \$11 for maintenance and \$4 taxes. However, such a long life is unreasonably conservative given the volatile nature of demand from a single customer location (customer contracts typically run only 2 to 3 years). Accordingly, even the 6-year figure assumes at least one contract renewal, and the figure presented in this footnote is offered strictly for sensitivity analysis purposes.

Building Ring:

As stated above, Building Rings are typically about 30 miles in total length and connect 10 to 20 buildings to the LSO transport node. As with the Customer Lateral, the Building Ring is assumed to be an underground fiber placed within one of the four highest density zones of the HAI model. Accordingly, the same unit cost per foot and per strand is employed as was used for determining the investment cost of the lateral. The cost modeling assumes 2 strands per building. Accordingly, the gross investment in the Building Ring is about \$6.7 million.⁷ Because this facility is shared among 20 buildings, the assigned investment cost per building is \$334,952 of gross investment. Note that the maximum number of buildings typically placed on a ring was employed. As a result, this generates the lowest likely gross investment attribution.

A consistent approach was used to develop the monthly cost for the Building Ring component as was employed for the Customer Lateral. The only exception is that the life for the Building Ring was assumed to be that of underground fiber, *i.e.*, about 26 years, rather than the 6-year life for the lateral. While the life of an individual lateral may be relatively short, the assumption here is that as individual buildings drop off the ring (due to lack of demand) others are added to replace them, resulting in a stable number of on-net buildings. The monthly investment recovery cost is \$5,533 and the associated monthly maintenance and tax-related costs are \$170 and \$285, respectively. The total Building Ring assigned cost is, therefore, \$5,988 per month per building.

LSO Ring Transport:

The last component of physical connectivity associated with the CLEC loop is the LSO Ring transport. This is the same connectivity that would be employed by any other service configuration or loop connecting to the CLEC network through the node. As such, the cost previously developed for the Transport *ex parte* is employed here. Because the costs are basically fixed at the node, the issue is simply one of determining the total DS3 volume presented to the node and then determining the number of DS3s that an individual building contributes. For the purposes of this analysis, the fixed costs of the node are assumed to be the same as that developed in the Transport *ex parte* or \$32,557 per month. Furthermore, in order to present the most conservative evaluation of the cost of a CLEC loop, the analysis assumes that the facility is used to 90% of capacity, or \$740 per DS3 per month.

Customer Location Costs:

The customer location costs are primarily equipment and space related. The equipment costs are related to those elements shown at the customer location in Figure 2: the DSX-1, the Optical Mux and the Fiber Distribution Panel (FDP). The FDP investment is the

⁷ The calculation is as follows: 30 miles * 5280 ft/mi * (\$40.99/ft + 20 buildings*(2 strands/building)*(\$0.033/strand-foot).

same as that used in the Transport *ex parte*, i.e., \$1000 per panel and 2 connections per multiplexer at \$60 per connection (\$1120 per connected panel). The Optical Mux cost is that for an OC-3 and is found in the HAI inputs (p. 96). The common cost is \$20,000 plus \$500 per 7 DS1s, up to a maximum of 84 DS1s. No cost was available in HAI for the DSX-1; however, costs were available on the ADC website for such equipment (www.adc.com). Specifically, a DSX-1 shelf with a capacity of 84 DS1s is priced at \$2,085 (see item: Di M2GU1). Most customer building connections are at the OC-3 level. Accordingly, the investment at a customer premise is \$23,205 plus \$500/7 DS1s. This converts to a monthly cost of \$407 plus \$9 for every 7 DS1s active.⁸ Thus, the total monthly investment cost for equipment at a customer location is in the range of \$416 to \$513 if from 1 to 84 DS1 (84 DS1s equal 3 fully utilized DS3s) are active. This investment cost results in a maintenance cost of \$40 to \$49 and taxes of \$23 to \$28 per month.

The final cost that must be considered is that for space rental. For the purposes of this analysis, space rental at each building adds about \$678 per month.⁹ Because no site preparation costs are explicitly included, there is no associated gross investment and, accordingly, no maintenance assumed. Taxes, however, account for \$34/month.

The customer location costs are summarized below:

Item	Investment Cost	Maintenance	Other	Taxes	Total
Equipment	\$416 to \$513	\$40 to \$49	\$0	\$23 to \$28	\$479 to \$590
Space	\$0	\$0	\$678	\$34	\$712
Total at Premise	\$416 to \$513	\$40 to \$49	\$678	\$57 to \$62	\$1,191 to \$1,302

Node Costs:

As shown in Figure 2, the equipment at the node necessary to interface with the LSO Ring transport included a FDP, an OC-3 multiplexer, a DSX-3 cross-connection device and a DCS. The FDP and OC-3 have the same cost, maintenance and tax implications as for the customer premises. The cost of the DCS is found in HAI 5.2 inputs (p. 99) and reflects a gross investment of \$30,000 per DS3. HAI inputs do not explicitly list a DSX-3 cost. The same ADC website referenced for the DSX-1 also contains a cost for a DSX-3 (see DSX-4B-24-7A), which is \$8,463 and can accommodate 24 DS3s. Because this function is shared at the node, rather than incurring the full cost of a shelf, the study

⁸ The equipment lives, gross salvage and maintenance factors are those used for circuit equipment as described in the Transport *ex parte*, i.e., 10.24 years, -1.69% and 2%, respectively.

⁹ AT&T's internal records relating to common space rentals indicate a national average monthly cost of \$678.30.

assumes that sharing occurs and that the cost will be incurred on a DS3 basis (or \$353 per DS3 port). Based on Figure 2, 5 ports are required per DS3 at the node. Accordingly, the gross investment formula for the node is $\$21,120 + \$500 \text{ per } 7 \text{ DS1s} + \$30,863 \text{ per } 84 \text{ DS3s}$.¹⁰ Thus, the node costs are largely a function of the number of DS3s delivered from the building. The table below summarizes the node related costs for various demand levels at the building:

Building Volume (DS1s)	investment cost	maintenance	taxes	total
0-7	\$922	\$87	\$50	\$1059
8-14	\$931	\$88	\$51	\$1070
15-21	\$940	\$89	\$51	\$1080
22-28	\$949	\$90	\$52	\$1091
29-35	\$1516	\$144	\$83	\$1743
36-42	\$1525	\$145	\$83	\$1753
43-49	\$1534	\$145	\$84	\$1763
50-56	\$1543	\$146	\$84	\$1773
57-63	\$2110	\$200	\$115	\$2425
64-70	\$2119	\$201	\$116	\$2436
71-77	\$2128	\$202	\$116	\$2446
78-84	\$2137	\$203	\$117	\$2457

¹⁰ The investment cost equation, based on the same life and salvage assumptions applied to the customer node equipment is $\$355 + \$558/\text{DS3} + \$9/7 \text{ active DS1}$. The fixed cost is slightly different compared to the customer premises, because rather than one FDP there are two and the cost of those two are shared among 20 buildings.

With all the components of the cost now established, it is possible to develop the total cost of connecting a building that provides varying levels of demand:

DS1s active	Monthly Costs By Source						
	cust location eqpt	lateral	bldg ring	node eqpt	LSO Backhaul	total	avg cost/DS1
1	\$ 1,191	\$ 370	\$ 5,988	\$ 1,059	\$ 740	\$ 9,348	\$ 9,348
7	\$ 1,191	\$ 370	\$ 5,988	\$ 1,059	\$ 740	\$ 9,348	\$ 1,335
14	\$ 1,201	\$ 370	\$ 5,988	\$ 1,070	\$ 740	\$ 9,369	\$ 669
21	\$ 1,211	\$ 370	\$ 5,988	\$ 1,080	\$ 740	\$ 9,389	\$ 447
28	\$ 1,221	\$ 370	\$ 5,988	\$ 1,091	\$ 740	\$ 9,410	\$ 336
35	\$ 1,231	\$ 370	\$ 5,988	\$ 1,743	\$ 1,480	\$ 10,812	\$ 309
42	\$ 1,241	\$ 370	\$ 5,988	\$ 1,753	\$ 1,480	\$ 10,832	\$ 258
49	\$ 1,251	\$ 370	\$ 5,988	\$ 1,763	\$ 1,480	\$ 10,852	\$ 221
56	\$ 1,261	\$ 370	\$ 5,988	\$ 1,773	\$ 1,480	\$ 10,872	\$ 194
63	\$ 1,271	\$ 370	\$ 5,988	\$ 2,425	\$ 2,220	\$ 12,274	\$ 195
70	\$ 1,281	\$ 370	\$ 5,988	\$ 2,436	\$ 2,220	\$ 12,295	\$ 176
77	\$ 1,291	\$ 370	\$ 5,988	\$ 2,446	\$ 2,220	\$ 12,315	\$ 160
84	\$ 1,301	\$ 370	\$ 5,988	\$ 2,457	\$ 2,220	\$ 12,336	\$ 147

Having the total cost and unit cost for a constructed loop now permits an evaluation of when it is reasonable to substitute a build for an alternative facility. Because AT&T has generally been unable to obtain high capacity UNEs, particularly UNE DS1 loops multiplexed onto UNE DS3 facilities, the only possible comparison is to ILEC special access.

Special Access Alternative:

Other than access to a UNE loop, the alternative to constructing loops is a special access configuration from the customer premises to the CLEC network. Given the volumes, the configuration would most likely be a combination of DS1 channel terminations, DS3:1 multiplexing and DS3 interoffice transport. The approximate cost of such a configuration, under a long term pricing arrangement, is approximately the following:

DS1 Channel Term (with NRC amortized): \$113 to \$127 per DS1/month
 DS3 fixed with mux (NRC amortized): \$850 to \$1,018 per DS3/month
 DS3 interoffice mileage: \$53 to \$73 per mile per DS3/month

The figure represents the approximate rate, averaged across RBOC territories, for a three-year term agreement, and the lower figure represents the average rate for a 5-year term agreement. This is, therefore, a highly conservative estimate of the ability of a CLEC to self-deploy a loop because special access rates are well-above the RBOCs' economic

costs. As AT&T has explained, a CLEC needs to achieve costs comparable to the RBOC's economic costs in order to deploy economically its own facilities.

These unit costs can be used to develop the average (per DS1) cost of a special access configuration. The only additional information required is the inter office mileage. For the analysis, the same mileage was used as is employed for the transport *ex parte* (8.94 miles). The following table compares the average cost per DS1 under an overbuild assumption (build) compared to the average cost of obtaining the equivalent capacity as a DS1 Channel Termination + DS3 interoffice transport using access obtained under a 5-year term agreement (SA-5) or a 3-year term agreement (SA-3). The table shows that the average cost of the self-provided loops are not less than special access pricing until a third DS3 is activated (each DS3 represents 28 DS1s). At 63 active DS1 loops, the build has a superior cost structure compared to the 3-years special access average unit cost (\$195/DS1 compared to \$206/DS1). Similarly, compared to the 5-year special access average unit cost, it is not until the 77th DS1 is activated that the build unit cost are an improvement over the special access rate (\$160/DS1 compared to \$165/DS1). All this leads to the conclusion that a CLEC requires at least 3 DS3s of customer demand at a building before a facility build can generally be proven in as financially prudent.

DS1s	build	SA-5	SA-3
7	\$ 1,335	\$ 302	\$ 365
14	\$ 669	\$ 208	\$ 246
21	\$ 447	\$ 176	\$ 206
28	\$ 336	\$ 160	\$ 187
35	\$ 309	\$ 189	\$ 222
42	\$ 258	\$ 176	\$ 206
49	\$ 221	\$ 167	\$ 195
56	\$ 194	\$ 160	\$ 187
63	\$ 195	\$ 176	\$ 206
70	\$ 176	\$ 170	\$ 198
77	\$ 160	\$ 165	\$ 192
84	\$ 147	\$ 160	\$ 187

**BEFORE THE
PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA**

In the Matter of)

Continued Availability of Unbundled)
High Capacity Loops at Certain Locations)
And Unbundled High Capacity Transport)
On Certain Routes Pursuant to the)
Federal Communications Commission's)
Triennial Review Order)

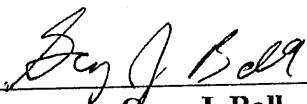
Docket No. 20003-327-C

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STATE OF CONNECTICUT

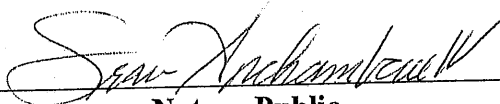
COUNTY OF FAIRFIELD

Gary J. Ball, being first duly sworn, deposes and says that he is the same Gary J. Ball whose Rebuttal Testimony and Exhibits accompany this affidavit, that such testimony was prepared by him; that he is familiar with the contents thereof; that the facts set forth therein are true and correct to the best of his knowledge, information and belief; and that he does adopt the same as his sworn testimony in this proceeding.



Gary J. Ball

Subscribed and sworn before me on this 30th day of March, 2004.



Notary Public

State of CONNECTICUT

My commission expires on 9/30/07



CERTIFICATE OF SERVICE

I, the undersigned employee of the law offices of Sowell Gray Stepp & Laffitte, LLC, attorneys for CompSouth, do hereby certify that I have served a copy of the pleading(s) hereinbelow listed via e-mail (unless otherwise specified) to the following address(es):

Pleadings:

**Rebuttal Testimony of Gary J. Ball on Behalf of Competitive Carriers of the South, Inc. (PUBLIC VERSION)
(in Docket No. 2003-327-C)**

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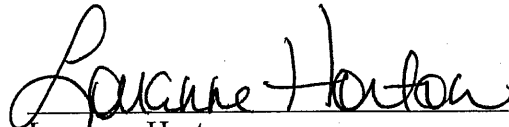
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March 31, 2004